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THE

SOUTHERN CULTIVATOR,

A SEMI-MONTHLY JOURNAL,

DEVOTED TO SOUTHERN AGRICULTURE,

Designed to improve the Mind,

AND

ELEVATE THE CHARACTER OF THE TILLERS OF THE SOIL,

AND TO

INTRODUCE A MORE ENLIGHTENED SYSTEM OF CULTURE.

EDITED BY J. W. JONES.

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INDEX.

Affleck's, Thos. proposition 195
Agricultural Letter of Gen. Washington.... 1
Agricultural Associations, importance of.. 158
" Address of Mr. Botts, notice of..... 208
" " Hon. W. C. Rives.. 20
" " H. Coleman..... 33, 43
" " Jas. Rankin's, extract..... 37
" " Col. Wailes..... 92
" " Judge O'Neall..... 108
" " Dr. Braxton's, extract..... 141
" Almanac, American for 1844..... 167
" aphorisms..... 203
" Chemistry..... 63
" Education..... 51
" Era, the great coming..... 127
" Experiment, a curious..... 199
" Facts..... 24
" Fairs..... 135
" Hymn..... 88
" Products, value of in U. S..... 60
" Queries, answer to..... 50
" Schools..... 43
" Society, Fair and Cattle Show of N. Y. State..... 106, 164, 167
" Society, Morgan County..... 119
" " Monroe " 141
" " Wilkes " 151, 179
" " Bowling Green..... 206
" " Newberry Dis..... 157
" " " report of..... 174
" " Barbour Co., Ala..... 197
" " " Fair..... 199
" Societies..... 32, 100, 134, 143
" Speech of Mr. Everett..... 156
" Works..... 95
Agriculture..... 140
" economy of..... 205
" English..... 95
" instruction in..... 132
" improved..... 203
" legislative aid to..... 125
Ammonia..... 101
An experiment..... 191
Animals, gestation in..... 120, 200
Ants, to destroy..... 10, 40
Apples, fourth crop of..... 190
A proposition..... 113
Ashes, value of..... 98
Asparagus, new method of growing..... 24
" beds..... 166
" cutting..... 59
A veteran..... 123
Bacon, curing..... 172, 175, 208
Bagging, Cotton..... 111
Bags, " 116
Bees..... 7
" management of..... 53
" wax..... 24
Berkshires, splendid..... 71
" pig, a fine one..... 38, 134
" pure..... 121
Birds, a plea for..... 96
Bleeding at nose, to stop..... 111
Bread, recipe for making good..... 22
" apple..... 178
" superior..... 200
Breeders, convention of..... 131
Breeding, rules for,..... 126
Brine..... 23
Bugs, lice, &c., to destroy..... 37
" on potato vines, " 53
" bed, " 141
Burns, Flour for,..... 205
Butter, press for making..... 16
" churning..... 205
Butter, how to cure..... 82, 128
" to prevent the flavor of turneps in.... 101
" making..... 117
" experiments on production of..... 178
Cabbages, to destroy worms on..... 139, 165
" to cause to head in winter,..... 46
Calves, to cure scours in..... 44
" rearing of..... 101
Candles..... 37
Catterpillars, receipe for killing..... 37, 79, 112
Cattle, cure for choked. 5, 63
" management of..... 178
" cure for red water in..... 63
" for the South..... 86
" economy in feeding..... 91
" sheds for..... 98
" of Great Britain..... 98
" turning into fields..... 155
" comparative merits of..... 138
Cement, Keen's marble..... 42
" recipe for making Cistern..... 195
" to mend broken China, &c..... 7
Charcoal, its nutritive qualities..... 30
" as a fertilizer..... 133
Cheese, inoculating..... 197
Chemistry, Liebig's animal..... 36
Chickens, gapes in..... 3, 151
" hatching..... 180
" rearing..... 37
Cloth, water-proof, for making..... 104
Clover, plowing under..... 7
" cultivation of..... 147
Cockroaches, to destroy..... 141
Coffee, to make from sweet potatoe..... 22
" " good..... 30
Colts, altering..... 126
Compost heap..... 86
Consumption of Great Britain and Ireland.. 174
Contributors, to anonymous..... 87
Corn..... 29, 202
" analysis of Indian..... 126
" a recipe to make grow..... 48
" ashes on..... 85
" cobs..... 187
" crushing—cornstalks..... 147
" cultivation of..... 45, 114, 159
" improvements of Indian..... 29, 156, 159
" Indian..... 139, 177
" Indian and old field pines..... 30
" method of planting..... 53
" on curing..... 142
" on saving seed..... 179
" preparation for seed..... 40
" product of..... 15
" table showing number of hills, &c..... 39
" soaking for horses..... 42
" sowing broadcast..... 53, 94, 207
" weevil in..... 175
Corns, to eradicate..... 38, 112, 163
Cotton Planters, facts for,..... 120
Cotton, preparation of for market..... 167
" topping..... 167, 205
" how to make a large crop of..... 12
" culture of..... 14, 15, 150
" consumption of..... 67
" rust in..... 162
" the trade..... 67
" improved culture of..... 121
" new " 142
" bagging, home made..... 206
Correspondents, to..... 6, 14, 103, 119, 127
Cow, a good..... 48
" cotton seed for..... 55, 71
" disease of..... 95
" dry for fattening..... 163
Cow, remedy for sore teats..... 53
" to increase milk of..... 130
" treatment of..... 69
" milking..... 45, 69, 147
Crops, necessity of change..... 61
" on alternation of..... 76
" rotation of..... 87
" nutritive qualities of different..... 91
" a good..... 142
" how to have a good..... 180
" the..... 36, 151
" premium in N. Y..... 72
Curious result..... 128
Dairy Secrets..... 32
Dig about and dung it,..... 47
Distemper, horn, to cure,..... 120
Dogs, distemper in..... 24
Do your work well..... 54
Dung-pit, directions for forming..... 63
Earnest, A. E., letter of..... 172
Eggs, preservation of..... 107
Eight things that do not look well..... 191
Essay—Gaylord's prize..... 145. 169, 185
" Mr. Foot's "..... 57, 62, 65, 73, 83
Excerpts..... 205
Exercise..... 70
Facts worthy of notice..... 94
Faith and Works..... 77
Farmers, hints to..... 16
" duties of..... 44
" Encyclopædia and Dictionary..... 47
" Important to..... 48
" Friendly advice to small..... 59
" The Irish..... 127
" Profession..... 159
" Life..... 168
" Creed..... 181
" Clubs..... 187
" Sons..... 132
" Very important to..... 196
" rules worth being observed by,..... 203
" daughters, advice to,..... 68, 204
" hints to young..... 207
Farming, Book..... 31, 67
" Implements..... 32
" without Rum..... 45
" good..... 120
" Economy of..... 135
" proper dsposition of capital..... 163
Farms, management of..... 188
" small..... 189
" improvement of..... 49
" cultivate small..... 119
" President Quincy's..... 24
" a Maryland..... 54
" splendid..... 104
" Virginia..... 184
" a Model..... 191
" the, endearments of,..... 133
Fly, the Hessian,..... 35
Fodder, value of different kinds..... 70
Foot Evil, cure for..... 193
Fowls, period of incubation..... 200
Fruit Gatherer,..... 183
" drying..... 165
" to protect late from frost,..... 43
" good..... 205
Fruit Trees, how to make bear..... 141
" " management of..... 148
Furniture, dusting,..... 112
Galls and gullies..... 207
Gardners, to..... 96
Geological definitions,..... 171
Good advice,..... 55
Grafting,..... 16

INDEX OF VOL. I.

Grafting, cement for, 40
Grape Vine cuttings, 16
Grass, Gama, 60
" " cultivation of, 103, 106
" comparative advantages of, 124
" time for mowing, 133, 136
Gullies in land, mode of stopping, 81
Hams, receipt for curing, 195, 208
Hard times, cure for, 181
" " hints for, 63
Health, preservation of, 45
" maxim of, 47
Heifers, proper age to bring calves, 88
Hogology, something about, 56
Hogs, salt good for, 10
" importance of, 115
" cure for kidney worms in, 142
Home improvements, 39
" its affections, 96
Honesty, 168
Horse, cure for foundered, 13, 26
" colic in 15, 19, 80, 131
" founder 24
" cure for inflamed eyes in, 52, 79
" " cough, 93
" " scratches, 102
" " bots, 106, 135, 171
" " poll evil, 39, 142
" " sweny, 173
" " spavin, 179
" " heaves, 188
" feeding, 112
" a dirt eater, 135
" shoes, 16
Horses, 96, 198
" salting, 5, 156
Horticulture, 80
" extract from report on, 37
Housewives, to, 40
How to be rich, 181
Improvement, progress of, 49
Indian Pea, Ruffin's remarks on, 193
Industry, 44, 52, 95
Ink, to make permanent marking, 24
" restore frozen, 51
" indelible, 95
Insects, to destroy 112
Jesus Christ, description of person of 72
Jacks, Jennys and Mules, 62
Labor, head and hand, 104, 120
" dignity of, 208
Ladies, important to, 163
Land in sight, 120
" on clearing, 173
" improving old, 183
" cultivation of clay, 7
" 500 reasons for improved, 128
Lice on cattle, cure for, 39
" Fowls, " 44
" animals, to kill, 80, 94
" Plants, to mesmerize, 112
Lightwood from old field pines, 64
Lime for fruit trees, 13
" and marsh mud, 13
" value of 30
" in agriculture, 39, 72
" a stimulant, 132
" as a manure, 93
Liming, 20, 59
Locusts, crows, &c., utility of, 119
Looking glassess, to clean, 112
Manure, 51, 53, 179
" application of, 5
" preserving, 205
" Bommer's, 10, 14, 58, 78, 110, 134, 138, 142, 155, 174, 190, 199, 202
" comparative benefits of 35
" making, 45, 180
" salt as, 50, 140
" management of, 58
" experiments with salt, 67
" charcoal as, 91
" new method of making, 154
" by plowing in green crops, 183
Manuring, a science, 137
" cotton lands, 149
" green, 154
" value of, 54
Marl, 105, 111, 203
Marling in South Carolina, 9
Maxims, 147
Mechanics, 40
" the working, 120
Milk cellars, 131
Molasses, corn stalk, 158
Moles, destruction, 16
Mules, 62, 116
Neatness, 151
Oil, flax seed, 147
Old field, a piney, to improve, 40
Orchard, reason for planting one, 67
Orchards, 42, 141
" transplanting of, 179
Overtrading, 64
Oxen, fat, 183
" best mode of harnessing, 189
Paint, cheap, 7
Patents, Commissioner's report, 61
Peach trees, 40
" " preservation of 3
Pear trees, blight in, 53
Piles and cataract, a cure for, 55
Planter, Columbia, S. C., 62, 183
Planters' Club of Hancock, 6
" " " fair of, 8, 182
" " " premiums of, 64
" to Southern, 6
" calender for Sept., Oct. and Nov., 166
Plaster, value of, 11
" use of, 111
Plowing, deep and shallow, 11, 140
" match, 38
" Horizontal, 47
" for corn, 56
" fall and winter, 183
Potatoes, Irish, 14, 15, 23
" on increasing growth of 15, 40
" planting large, 64
" how to cook, 72
" watery, 166
Pork fattening, 174
Poudrette, 27, 31, 205
Poultry houses, 205
Practical hints, 97
Press the, opinions of 38
Pruning fruit trees, 13, 42, 43
Punctuality, 79
Pumpkins, 5
Rails, durable, 13
Raspberry, on the cultivation of, 90
Reaping Machine, new, 100
Recipes, 93, 144, 166
Reformation, or bankruptcy among planters of cotton States, 68
Rhubarb, 166
Roller, the 46
Roots, 28
" culture, 110
Rye, turning to cheat, 102
" for soiling, 155
Salt, in agriculture 77
" experiments with 118
" use of 147
" dairy 8
" for trees, 30
Saltpetre in meat, 48
Sausages, Oxford 24
Scald or burn, to cure, 199
Scraps, from DeKalb co., 139
Scythes, preserving from rust 107
Seeds, 125, 150
" home Beet 32
" selecting 200
" proper depth for 204
Sheep, foot rot in 22, 48
" Skins, how to cure 24
" in the South, 86
" yield of wool, 95.
" scab in 104
" fine wool, 123
Silk, domestic 97, 103, 104
" manufacture of in N. Y. State Prison 75
" cultivation of 80
" culture in Georgia 82, 87
" American manufacture of 107
Snake bite, to cure, 120
Soapsuds for manure, 29
" for cabbages 133
" save your 147
" making 71, 143
Soil, renovation of 3
" improvement of by mixture, 14, 140, 149
" " sandy 4
" Night 69
" spurry for sandy 133
" mixture of 152
" acids in 192
" organic constituents of 201
Southern Cultivator, to subscribers of 206
Sows, remedy for barrenness in 190
Squashes, 197
Stock, criterion for judging 111
" care of 122
" domestic, improvement of 129, 153
" rules for " in breeding 179
Strawberry, 46
Subsoiling, 161
Sugar, corn stalk, 17, 23, 25, 26, 31, 41, 90, 136
" boiler, cheap 114
Sunny side, the 123
Sweet Potatoes, cultivation of 38, 78
" " to cure 71, 81, 87, 95
" " preserving 179
" " for Hogs, 80
Swine, cure for mange in 102
" spaying 40, 122
" fattening 48
" salts for 75
" management of 199
Syrup, corn stalk 96, 158
" blackberry 150
Tanning on plantations, 198
Tanner's bark, 91
Terms, explanation of, 191
Tetters and ringworms, cure for, 203
Things to be remembered, 104
" that has been seen, 165
Times, the 88
Tomato, 61, 155
" figs, 141
" sauce, 148
" ketchup, pickles, 149
Tomatoes, for cows, 40
Tools and tool sheds, 205
Top dressing, 8
Trees, transplanting, 188
True female nobility, 48
Turnep, cultivation of 56
" Ruta Baga, 28
Union co., Ky. prize association, 14
Valuable table, 207
Vegetables, do. nourishment of different 70
Vinegar making, 7, 53
Watermelons and cantelopes, cultivation of 55
Warts on horses and cattle, to cure, 56
Weather, prognostics of the, 46
Weeds, how to kill 128
Wheat, selecting seed 2
" smut in 15, 122, 160, 173
" rust in 21, 23, 86, 125
" to prevent smut in 52, 116
" immense crop of 22
" " products of 181, 189
" cultivation of 59, 143, 181
" preparation of seed, 52, 163
" does turn to chess, 133
" and chess, 133
" a last word on 166
" sowing 168
" Mediterranean or Germany 203
Whitewash that will not rub off, 112
Wholesome truths, 144
Whooping cough, cure for 72
Winter, preparation for 179
Wives, rules for, 197
Women, American, the responsibilities of 89
Wood, M. Boncherie's method of preserving 102
" acid in 131
" fire, value of seasoned, 46
Woolen goods, to wash, 35
Work, blacksmiths 23
" for August, 135
" for September, 151
Worms in children, to prevent, 142
" " to cure 95
" wire, 112
" lime water for 141
" cut 79
" " salt for 87
" " to destroy 47

SOUTHERN CULTIVATOR.

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AGRICULTURAL LETTER FROM GENERAL WASHINGTON.

We are indebted to the kindness of an old friend for the following valuable document: valuable not only because of the revered source from which it emanates, but because it affords many excellent lessons from an able and practical farmer; it is, too, strongly characteristic of the American hero. We see here the exercise in private life of that attention to detail, that inflexible devotion to order and discipline, which so eminently mark the public character of Washington. No one can read this letter without seeing at once that the writer was an industrious, sound *practical* farmer. He, whose indomitable energy had given freedom to a world, did not esteem the most minute details of agriculture unworthy his attention.

It will probably surprise the reader to find Gen. Washington insisting upon the use of harrows and cultivators in the cultivation of his corn; this we have been accustomed to plume ourselves upon as a much more modern invention.

The letter directed to his overseers, is taken from the manuscript copy in Washington's own hand writing, and, as we are informed, now appears in print for the first time. [*Southern Planter.*

—

PHILADELPHIA, 14th July, 1793.

GENTLEMEN:----It being indispensably necessary that I should have some person at Mount Vernon through whom I can communicate my orders; who will see that these orders are executed; or, if not obeyed, who will inform me why they are not; who will receive the weekly reports and transmit them; receive money and pay it; and in general to do those things which do not appertain to any individual overseer----I have sent my nephew, Mr. Howell Lewis, (who lives with me here) to attend to them until I can provide a manager of established reputation in these matters. You will, therefore, pay due regard to such directions as you may receive from him, considering them as coming immediately from myself. But that you also may have a general knowledge of what I expect from you, I shall convey the following view (which I have of the business committed to your charge) as it appears to me, and direct you to govern yourself by it; as I am persuaded nothing inconsistent therewith will be ordered by Mr. Lewis, without authority from me to depart from it.

1st. Although it is almost needless to remark that the corn ground at the farm you overlook ought to be kept perfectly clean and well ploughed----yet, because not only the goodness of that crop depends upon such management, but also the wheat crop, which is to succeed it. I cannot forbear urging the propriety and necessity of the measure in very strong terms.

2d. The wheat is to be got into the barns or into stacks as soon as it can be done with any sort of convenience, that it may not (especially the bearded wheat, which is subject to injury by wet weather,) sustain loss in shocks----and because the shattered grain in fields may be beneficial to the stock; but no hogs are to be put on stuble fields in which grass seeds were sown last fall, winter or spring; other stock, however, may be turned on them, as it is rooting that would be prejudicial.

3d. The whole swamp from the road from Manley's bridge, up to the lane leading to the new barn, is to be got into the best and most complete order for sowing grass seeds in August----or, at the farthest, by the middle of September. The lowest and wetest part thereof, is to be sown with timothy seed alone. All the other parts of it are to be sown with timothy and clover seeds mixed. The swamp on the other side of the aforesaid lane (now in corn and oats) is to be kept in the best possible order, that the prrt not already sown with grass seeds may receive them either this autumn (as soon as the corn can be take off with safety) or in the spring, as circumstances shall dictate.

No exertions or pains are to be spared at Daguerun to get the swamp from Manley's bridge up to the meadow above, and the two enclosures in the mill swamp, in the highest order for grass, to be sown in the time and manner above mentioned. But that no more may be attempted than can be executed well, proceed in the following order with them accordingly as the weather may happen to be, for this must be consulted, as dry weather will answer to work in the low parts best, whilst the higher grounds may be worked at any time.

1st. Begin with the swamp from Manley's bridge upwards, and get all that is not already in grass, well prepared for it, and indeed sown. 2d. That part of the low meadow on the mill run, which lies between the old bed of it and the race, and within the fences. 3d. After this is done, take that part of enclosure above (which was in corn last year,) lying between the ditch and fence No. 1, up and down to cross fences. 4th. Then go over the ditch and prepare slip after slip as the ditch runs from the one cross fence to the other, and continue to do this as long as the season will be good, or the seed can be sown with propriety and safety.

I conceive that the only way to get these grounds in good order and with expedition, is to give them one good ploughing and then to tear them to pieces with heavy harrows. Whether it be necessary to cut down and take off the weeds previous to these workings can be decided better by experiments on the spot than by reasoning on it at a distance. My desire is that the ground shall be made perfectly clean, and laid down smooth; without which meadows will always be foul----much grass left in them, and many scythes broken in cutting what is taken off.

4th. The buckwheat which has been sown for manure ought to be ploughed in the moment a sufficiency of seed is ripe to stock the ground a second time; otherwise, so far from its answering the purpose of manure, it will become an exhauster. For this reason, if the ploughs belonging to the farm are unable to turn it in in time, those of Muddy hole, Dague run and Union farm, must combine to do it, the work to be repaid by the farm which receives the benefit, as soon as the work is accomplished thereat.

5th. Where clover and timothy seeds are mixed and sown together, allow five pints of the first, and three of the latter to the acre; and where timothy only is sown, allow four quarts to the acre. Let the seed be measured in the proportions here allotted, and put into a half bushel, and the half bushel filled with sand or dry earth, and extremely well mixed together in your own presence or by yourself, which will answer two good purposes, viz: 1st, to prevent theft, for seeds thus mixed, would not sell----and 2dly, the seedsman being accustomed to sow a bushel of wheat to the acre would be at no loss to cast a bushel of this or anything else, regularly on that quantity of ground.

6th. It is expected you will begin to sow wheat early in August, and in ground perfectly clean and well ploughed. I would have, and do accordingly direct that not less than five pecks of seed be

sown on each acre. The plan of the farm over which you look is given to Mr. Lewis, from which the contents of each field may be known. And it is my express direction that every watch and the best attention may be given to see that this quantity actually is put in; for I have strong suspicions (but this ought not to be hinted to them) that the seedsmen help themselves to a pretty large toll.

7th. As soon as you have done sowing and even before, if it can be done conveniently, you are to set heartily about threshing or treading out the wheat; and as fast as it is got out, to have it delivered at the mill or elsewhere, according to directions. The longer this business is delayed, the more waste and embezzlement will there be of the crop. The wheat is to be well cleaned; the chaff and light wheat are to be properly taken care of for the horses or other stock----and the straw stacked and secured as it ought to be against weather and other injuries; and until the whole be delivered, it will require your constant and close attention.

8th. The oats at the farm you overlook, are I presume all cut; in that case, let all the scythes, and cradles, and rakes which you have received, be delivered over to the mansion house; or if you choose to keep them against next harvest you must be responsible for them yourself.

9th. The presumption also is, that the flax is, ere this, pulled; let it be well secured and at a proper season stripped of its seed and spread to rot. During this operation, let it be often turned and examined, that it be not overdone, or receive injury in any other respect by laying out too long.

10th. Get the cleanest and best wheat for seed, and that which is freest from onions. I would have about one-third of my whole crop sown with the common wheat; one-third with the white; and the other third with the yellow bearded wheat. The overseers (with Davy, as he knows the state of his own farm and the quality of the wheat which grows upon it,) may meet and decide among themselves whether it would be best to have some of each of these sorts on every farm; or in order more effectually to prevent mixture, to have one sort only on a farm. In the latter case, the cutting of that which ripens first, and so on, must be accomplished by the force of all the farms instead of each doing its own work. If the seed on one farm was to be sown on another, especially if seed which grew on a light soil was to be sown on a stiff one, and that which grew on a stiff one sown on a light ground, advantages would unquestionably result from it.

11th. The potatoes at the mansion house must be worked by the ploughs from Union farm, and when this is required, it would be best, I conceive, to accomplish the work in a day.

12th. It is expected that the fences will be made secure, and no damage permitted within them by creatures of any kind, or belonging to any body—mine any more than others.

13th. The greatest attention is to be paid to stocks of all kinds on the farms; and the most that can be made of their manure and litter. They are to be counted regularly, that no false reports may be made; and missing ones, if any, hunted for until found, or the manner of their going can be accounted for satisfactorily.

14th. A weekly report, as usual, is to be handed to Mr. Lewis. In this report, that I may know better how the work goes on, mention when you begin to plough, hoe, or otherwise work in a field, and when that field is finished. The increase, decrease and changes are to be noted as heretofore—and let me ask—

15th. Why are the corn harrows thrown aside, or so little used that I rarely of late ever see or hear of their being at work? I have been run to very considerable expense in providing these and other implements for my farms; and to my great mortification and injury, find, generally speaking, that wherever they were last used they remain, if not stolen, till required again; by which means they as well as the carts, receive so much injury from the wet weather and the heat of the sun as to be unfit for use: to repair or supply the place of which, with new ones, my carpenters (who ought to be otherwise employed) are continually occupied in these jobs. Harrows, after the ground is well broken, would certainly weed and keep the corn clean with more ease than ploughs. I hope, therefore, they will be used. And it is my express order that the greatest care be taken of the tools of every kind, carts and plantation implements, in future; for I can no longer submit to the losses I am continually sustaining by neglect.

16th. There is nothing I more ardently desire, nor indeed is there any more essential to my permanent interest, than the raising of live fences on proper ditches or banks; yet nothing has ever been, in a general way, more shamefully neglected or mismanaged; for instead of preparing the ground properly for the reception of the seed and weeding and keeping the plants clean after they come up---the seed are hardly scratched into the ground and are suffered to be smothered by the weeds and grass if they do come up; by which means the expense I have been at in purchasing and sending the seeds (generally from Philadelphia,) together with the labor, such as it is, that has been incurred, is not only lost, but (and which is of infinitely more importacne to me) season after season passes away, and I am as far from the accomplishment of my object as ever. I mention the matter thus fully to show how anxious I am that all the seeds which have been sown or planted on the banks of the ditches should be properly attended to; and the deficient spots made good, if you have or can obtain the means for doing it.

17th. There is one thing I must caution you against (without knowing whether there be cause to charge you with it or not)----and that is not to retain any of my negroes who are able and fit to work in the crop, in or about your own house, for your own purposes. This I do not allow any overseer to do. A small boy or girl for the purpose of fetching wood or water, tending a child, or some such thing, I do not object to; but so soon as they are able to work out, I expect to reap the benefit of their labor myself.

18th. Though last mentioned, it is not of the least importance, because the peace and good government of the negroes depend upon it---and not less so my interest and your own reputation. I do, therefore, in explicit terms, enjoin it upon you to remain constantly at home, (unless called off by unavoidable business, or to attend Divine worship) and to be constantly with your people when there. There is no other sure way of getting work well done and quietly by negroes; for when an overseer's back is turned the most of them will slight their work, or be idle altogether. In which case correction cannot retrieve either, but often produces evils which are worse than the disease. Nor is there any other mode but this to prevent thieving and other disorders, the consequence of opportunity. You will recollect that your time is paid for by me, and if I am deprived of it, it is worse than the robbing my purse, because it is also a breach of trust, which any honest man ought to hold most sacred. You have found me, and you will continue to find me faithful to my part of the agreement which was made with you, whilst you are attentive to your part; but it is to be remembered that a breach on one side releases the obligation on the other. If, therefore, it shall be proved to me that you are absenting yourself from the farm or the people without just cause, I shall hold myself no more bound to pay the wages, than you do to attend strictly to the charge which is entrusted to you by one who has every disposition to be

Your friend and servant,
GEO. WASHINGTON.

IMPORTANT IMPROVEMENT IN SELECTING SEED WHEAT.---In the selection of seed-wheat, take at least six bushels of a good quality, then take a sieve or screen with holes sufficiently large, so that five bushels of the six will pass thro' it. The one bushel that remains will be kernels of the largest size, and this should be used for seed. When this seed is sown and germinates, it will be found that the blades which spring from it will be uniform, and present the same healthy appearance, and will maintain the same equality until the time of harvesting.---Thus instead of having so great a proportion of small weakly stocks start from diseased or pinched kernels, which can never

produce anything but small straw and consequently wheat of an inferior quality, the whole will stand a fair chance to come to maturity, divested of many evils which attend the sowing of grain where sifting is neglected.

But, says the reader, this important discovery of which you speak, don't amount to any thing after all. It has been known for years, that to sift out the small grains from seed-wheat is a good idea, and is now generally practised among our best farmers. I will respectfully ask such, have you ever known sifting carried to the extent I propose? If you have not, you know but little of the real benefits that will result from this discovery and a practice in accordance with its reasonable theory.

I am informed that Isaac Bowles, Esq., of this town, tried the experiment the past season, and the result was what we had good reason to expect, the most perfect growth of wheat he has ever raised. I believe if this practice should be adopted generally by the farmers of this State, the quality and quantity of the wheat crop would in a very few years be increased one-quarter by the simple process of sifting seed in the proportion I have named, and no farmer need be afraid of injuring his seed by carrying the principle to too great an extreme. The improvement is within the reach of every farmer, and he can satisfy himself on this point.

[*Maine Farmer.*

GAPES IN CHICKENS.---Take as much soft soap as will cover the thumb-nail, and mix it with meal dough. Give it the chickens at any stage of the disease. If this fails on the first application it rarely does on the second. [*American Farmer.*

RENOVATION OF SOILS.

It is not my purpose to discuss the question of renovating soils, but to state the result of an experiment in wheat culture. The soil was rather a stiff clay, and having been some thirty-five years in arable condition, and for much of the former part of this time very productive of wheat, it had been, for want of a knowledge of the benefits of the "rotation system," sadly abused. In 1838, it was summer fallowed, having laid the four years previous to sheep pasture, but the crop of wheat which followed was very ordinary, not yielding ten bushels to the acre; which in part arose from the adhesive and clammy nature of the soil, causing the frost to heave a very considerable proportion of the plants on the surface to perish. This is well known to be a very common occurrence, in our climate, with heavy clay lands, if sowed late; but this was not the fact in the last particular, and the growth in the fall was beyond an average. After the crop was harvested, I observed on all parts of the field, numerous cracks on the surface, to a much greater extent than is usual with similar soils. I contemplated giving the field a heavy manuring the following season, and plant with corn; but subsequently changed my plan, having resolved to adopt the course recommended as above, by Chaptal. I consequently applied about twenty-five large cart loads of coarse, unfermented manure, drawn from my sheep barns, to the acre, which was spread no faster than the ploughs would cover. The plants, in the fall, assumed so dark a green, that I was a little apprehensive of the usual rank growth before harvest, which almost invariably follows the direct application of manure to the wheat crop, as well as large disproportion of straw to the berry. But doubtless owing to the great poverty of the soil, these results did not follow. The field averaged over twenty bushels to the acre, which is about the average production of well tilled fallow land, sown timely, and in favorable seasons, in this immediate quarter. The coarse manure had evidently effected a material modification of the soil, as few cracks were distinguishable on the surface, after harvest, showing most clearly, that it was more friable. It is a year ago last spring, since the grass-seed was sown upon it, and a more luxuriant covering of clover, I have rarely seen, than the field now presents; which is another proof of some renovation of the soil, otherwise very much of the clover would have been thrown out by the frost of last spring. It is my present impression, that if this field is permitted to rest for two or three years longer, and then sowed with buckwheat and ploughed under when in blow, preparatory to wheat, in consideration of what has already been done, its original fertility will be nearly restored, and in some measure the adhesive and clammy texture of the soil destroyed.

But while on this subject, I beg leave to enter a protest against applying manure, except compost, directly to the wheat crop, unless as in the above case, when the soil is rendered quite unproductive, by long and "skinning" management, before agricultural periodicals taught us better. You will permit me to quote your remarks, gentlemen, on this point; for I am quite sure they cannot be kept too much "before the people," from the 7th volume of the Cultivator, taken from a sterling article on "Wheat Culture."---"One of the greatest evils of direct manuring for the wheat crop, arises from the liability of the grain so manured, to lodge. The rapid growth of the stem, renders it unable to support its own weight. It is soft and flexible, contains much less silex than those grown in a poorer soil; the wheat does not usually perfect its berry, and at all times, from the thinness of the skin or cuticle, it is more liable to mildew and rust. These things render it certainly unadvisable, unless the land is very poor and reduced, to apply unfermented manure to wheat." My own experience, as well as thousands of others, in times past, will attest the truth of these remarks. As nearly as possible my practice conforms to the "rotation system;" and I apply my manure in an unfermented state, to my corn and potato crops, and top-dressing of meadows.

L. A. MORRELL.

PRESERVATION OF PEACH TREES.

Having to a certain extent succeeded in the cultivation of the peach in limestone soil, generally considered uncongenial to its growth, I forward by your request a short account of the method of cultivation and mode of nursing adopted.

The orchard, consisting of about fifty trees, was planted in the spring of 1836. At the time of planting, the ground was in grass, but was then subjected to the action of the plough, and has since been thoroughly tilled every year, yielding alternately heavy crops of sugar beets, potatoes and ruta baga. The trees have also been examined once, and sometimes twice a year, for worms, but have not generally been much infested by them.

This comparative exemption is no doubt in consequence of the various alkaline substances which have been successfully used. The most remarkable and immediate effect has followed the use of what is termed "fallen lime," fresh from the kiln; which, when applied in the proportion of about half a peck to the roots of unhealthy trees, and covered with earth, has restored a healthy color to the leaves; and trees which did not look worth a week's purchase have produced fair crops of good fruit in after years. Ashes from anthracite coal have also been applied with very good effect. These applications have usually been made in the spring, but occasionally later in the season. This year wood ashes were used in June with a marked benefit. Soapsuds have also been applied to advantage. In fact, any substance, which by its caustic quality is destructive of insect life, must be beneficial, provided it be not applied in quantities sufficient to injure vegetation. It is an interesting and encouraging circumstance, that several substances combine the properties of destructiveness to insectiverous life, with a direct and positive stimulating effect upon vegetation. In illustration of this fact, my friend Dr. Noble has applied oil soap to a portion of his extensive peach orchard, in the State of Delaware, to manifest advantage.

The mild weather of January and February will sometimes bring forward vegetation, so that the peach trees are liable to blossom prematurely. An attempt has been made to obviate this difficulty, by covering the roots about the body of the trees with wheat straw, when the ground is deeply frozen in winter. This process, by retarding vegetation, has secured them from the danger of the late frosts.

MORRIS LONGSTRETH.

IMPROVEMENT OF SANDY SOILS.

The Hon. W. Clark, of Northampton, has been the great pioneer in the improvement of sandy soils, and from the successful results he has achieved, we may fairly class him among the great agricultural reformers of the present day. He has already given to the public the theory of his operations, which we hope to find room to lay before our readers at some future time. Our object now is simply to give his practice, and after our farmers have begun the good work of reclaiming their almost barren wastes, it will be a pleasure for them to look into the *modus operandi*, and see the reasons of their success. There are three essential features in this practice, and the simultaneous adoption of each is essential to effect the desired object. The first is the frequent and thorough use of the roller; the second, a constant covering of crops on the ground; the third is the introduction of clover and grass as a fertilizer. To illustrate this, we give the history of a single field of some forty acres of worn-out sandy soil, in the vicinity of N. This field was purchased by Mr. C. some eight or ten years since for nine dollars per acre, while the fertile bottom lands, on the other side of the town, would sell readily for $150 to $200. His object was first to get a crop of corn if possible, and the land being too poor for this, he carried on to it a moderate quantity of peat or swamp muck, which was found in the low places on the same field. We may observe in passing, this peat and muck exist to an almost unlimited extent throughout New England, and we consider it of vastly more intrinsic value to the community than all the gold mines that have dazzled the eyes of our Southern neighbors for the last fifteen years. With this dressing, say of fifteen to thirty loads to the acre, the whole cost of which consists simply in digging and throwing into heaps, to be drained, and acted on by the atmosphere, after which it is carried either by carts or sleds in winter on to the adjacent ground; the land is then ploughed, and whatever scurf, sand grass, rushes, mosses, pusseys and briars there may be on the land are turned under, and such is the digestibility of the soil, all these raw materials are at once converted into humus or geine as food for the required plants. This sandy soil has the stomach of an ostrich, and if it cannot, as that voracious biped has the credit of doing, digest old shoes, iron spikes, and junk bottles, it can dissolve and convert into vegetable chyle, whatever organized matter is given to it. The effect of this comparatively slight dressing yielded a first crop of some thirty bushels of corn to the acre, enough to pay for the first cost of the land, and the whole expense of producing it. But while the corn was growing, say from the 20th of July to the 10th of August, rye with red and white clover seed was sown, and the corn being so planted as to admit of harrowing two ways, or even four if necessary, it was well got in with the harrow, and the ground being amply protected by the corn during the sultry weather of this season, the new seed took a vigorous start, and as soon as the corn was somewhat matured, it was cut and carried off the ground, and the new growth then had the entire possession. The roller was then thoroughly applied, as also in the following spring. The early sowing gives strength to the roots of both rye and clover, and renders hazard of winter killing either, especially the clover, much less. When from any cause he is prevented from sowing the clover early, it is omitted till early in the following spring; a postponement that should be avoided when possible, as it thus loses a year's time, requiring another season to mature. The rye is cut the following summer, when the clover is suffered to remain, shedding its seed upon the ground for a successive crop. The following season, if in a proper condition, it is again put into corn or rye according to its fertility, and the course is again renewed. The land, however, usually requires an additional season in clover, and sometimes more, to give the requisite fertility. Mr. C. showed us a field, which from the originally poor condition described, without the addition of any manure or peat or muck, has produced him five crops in seven years, the last, which he had but just taken off, yielding seventeen bushels to the acre. This, it will be readily admitted, is a large crop for poor land, and much beyond the average yield in New England. The growth of the clover on this field, of this spring's sowing, was promising in the highest degree, and as evenly set as in the best land, giving every promise of a large crop the next season, which of course is designed to be added to the soil for its future improvement. When the land is first put into use, (for Mr. C. has several other similar fields which have been variously treated, though always on the same principles,) and it is too poor to produce a paying crop of corn, and he has not time to add the muck, he turns under the surface vegetation, and puts on a crop of rye, always accompanying this with the clover, and after one year's crop from this last, he never fails in a fair yield of corn. On a field thus treated, without any dressing of muck, he got twenty-seven bushels of corn per acre for the first crop, and after an interval of another season, obtained thirty-three bushels on the same land, showing a decided increase in the productiveness of the soil. A slight dressing of plaster is generally, though not always, used, and never exceeds half a bushel to the acre. Mr. C. admits that more plaster might be useful; we think one or two bushels per acre would be applied with decided advantage, but it is purchased at a high price, about $10 per ton, and as economy and a self-sustaining policy has been a prominent principle in this system, this is all that has thus far been afforded. The muck would in all cases be a valuable, remunerating addition, but this he has not always the time to give, and at the prices he has paid for his land, he can afford to leave it once in two or three years in clover, by which it is renovated, and for the present perhaps this may be the most judicious plan. As lands become dearer, however, which they are rapidly doing under this management, they being now worth $20 to $30 per acre, of no better quality than such as he bought a few years since at $8 to $12, the policy of manuring will become more expedient, though the rapidly improving nature of this system will give greater efficacy to the clover crop as a fertilizer.

It is surprising to see the elevated noles and barren planes, that so lately exhibited nothing but a crawling sand, by the operations of the clover roots in this otherwise impracticable material, gradually changing its inadhesive character to a firmly connected mass, showing a furrow slice that would gratify the most practised eye. Mr. Clark acknowledges his surprise at the facility with which the clover takes, and attributes it mainly to the use of the roller. We are inclined to concede much to that instrument, but think for his white and other clover he is greatly indebted to the plaster. Of this we have more to say hereafter.

We observe the woodchucks, who are arrant epicures and gourmands in their selection of esculents, and especially of sweet and abundant clover fields, are thoroughly colonized over all the fields of Mr. C. They follow him, as our politicians do the successful candidate of executive dispensations for John Randolph's seven principles, the five loaves and two fishes. They snuff his green patches of trefoils, and instanter abandon the poverty-stricken fields of his unthrifty neighbors. His crop of woodchucks, though not as important as the *shoe crop* at Lynn, may soon be well worth the harvesting.

Mr. C. has not pursued this cultivation sufficiently long to have matured a system of rotation, which, however, he virtually practices with some variations, from his own judgment. A little more experience will enable him to determine whether a crop can be taken more advantageously every second or every third year; but we are satisfied with a moderate dressing for the corn, the rotation might be of three years' duration, affording alternately corn, rye, and clover, the last to be added entire when dry, to the soil, for its improvement. Green crops are never used as improvers, they always being allowed to mature before turning under. Plaster should always be added, unless ashes or lime can be more economically applied; but the former is limited in supply, and the latter is to be had only at a price which will effectually prevent its use in this region.

Here, then, we have a system for reclaiming barren wastes within every one's reach; costing nothing, and yielding a great deal; and if this were rigidly carried into practice, how soon should we see the naked sand banks that exist to a greater or less extent, every where between the Alleghanies and Atlantic, converted into verdant, luxuriant fields. Yet for the want of the application and steady perseverance in this plain, straight-forward, simple course, how many will continue to live on in ignorant poverty, when they might with less toil, and the use of a moderate share of intelligence, have a competency. A single bar left down in this practice, lets in the whole herd of Pharaoh's lean kine. Without the roller and plaster you get no clover; if you cut off the clover when grown, you get no subsequent crop; or if you crop too closely or rapidly, the clover-bearing properties of the soil are exhausted, and new manures, or years of idle, wasteful fallow are necessary to resuscitate it; whereas, by a careful observance of the above plan, the ground is constantly and profitably at work, bearing its burdens on equitable shares, giving one-half or two-thirds to you, and reserving the remainder to itself, to enable it to continue the supply. Though Mr. C. does not connect any grazing or stock-feeding with these operations, it is easy to see how it can most advantageously and profitably be associated with them. Cattle and sheep can be put on to the rye fields both in the fall and spring, when sufficiently thick and stout to justify it, and when well sodded over with clover, what more mutually advantageous to cattle and land than such a copartnership.

We must add a word for the benefit of such of our readers as have no sandy or sterile soils, nothing but virgin fertility, falsely estimated to be exhaustless. We beg all such to consider that the principles for reclaiming, are the principles for preserving also; that no land is so rich but that it can be exhausted, unless fed by inundations, and that there is more profit in sustaining their lands in the highest condition of fertility, than by a wasteful system of cropping, first to reduce them, to be resuscitated again by slow and painful efforts, or abandoned to posterity to be gradually reclaimed by the sure, though dilatory operations of nature, to that state of fertility in which they might easily have been preserved.

There are some particular advantages that attach to the tillage of light sandy soils. They require the least possible effort to plough and harrow, and these operations can be performed at all seasons when not frozen; no season is too wet, too late, or too early for them. They require no underdraining, and the food for vegetables, in whatever shape it is added, however crude and indigestible, is immediately converted into pabulum for the required crop. The amount of corn and rye afforded per acre would not satisfy a western farmer, and very properly too, but he must recollect that his prices seldom exceed one-half of those obtained at the east, rye and corn being worth usually sixty to ninety cents per bushel, and the straw and stalks go far towards meeting the cost of cultivation. The luxuries also, of good buildings, which are always to be had for less than cost, good roads, schools and churches, and all the accompaniments of a matured and well ordered society are at hand, and are cogent reasons for reconciling the reflecting mind to the absence of that superabundant fertility which so universally characterizes the West. [*American Agriculturalist.*

Pumpkins.—Early in April I ploughed a small field, deep and close; threw abought eight buckloads of barn-yard compost broadcast to the acre, and forthwith planted pumpkin seed at five feet distance in checks. I cultivated as corn until the middle of May, when the ground was pretty well covered in the more luxuriant spots of the vines. I then took hoes in hand and planted, in the replanting manner, corn in each pumpkin hill----the corn having remained in soak forty-eight hours. It came up at once, grew off kindly, and yields a fair crop of corn ----no vacant rows----corn in all.

Previously the pumpkin vines got such a start they were not checked by the growth of the corn, and now exhibit a small field more abundantly bespeckled with pumpkins, than any I ever saw by fourfold. My neighbors seldom pass without inquiring how I raise so many pumpkins and a fair crop of corn together? I tell them frankly the mode of culture, and the pumpkins show the result. I am astonished at my success; my little field----I ought to call it patch----is the admiration of all, and if this short account of the matter should be the means of helping my brother farmers to a like success, the end in view is obtained.

Parvus Agricola.
[*Nashville Agriculturist.*

Salting Horses.—A curious fact is mentioned in Parker's Treaties on Salt: "A person who kept sixteen farming horses, made the following experiment with seven of them which had been accustomed to take salt with their food. Lumps of rock-salt were laid in their mangers, and these lumps, previously weighed, were examined weekly, to ascertain what quantity had been consumed, and it was repeatedly found that whenever these horses were fed on old hay and corn, they consumed only from 2 1-2 to 3 oz. per day, but that when they were fed with new hay, they took 6 oz. per day." This should convince us of the expediency of permitting our cattle the free use of salt at all times, and it cannot be given in so convenient a form as rock-salt, it being much more palatable than the article in a refined state, and by far cheaper. A good lump should always be kept in a box by the side of every animal, without fear that it will ever be taken in excess.

[*Farmers' Cabinet.*

Application of Manure.---The most essential point in my estimation is not thoroughly looked at, viz: the making of the most of our manure after once made. Some say put it where you are going to plant corn or potatoes, and plough it under, and it will ferment and rot, and as the soil is thirsty it will absorb it. So it will for a season; but as you plough and hoe, you stir up the manure and leave it exposed to the scorching sun, and it evaporates and is wasted. The spring following, you plough and sow the same field with oats, as is generally the case; and here you not only expose the manure, but the first crop, after it is well mixed with the soil, is one calculated to impoverish it the most. Then comes a crop of rye or wheat, which, with your oats and corn, exhausts three-fourths of the manure. Thus in my estimation this three-fourths is lost to the farm.

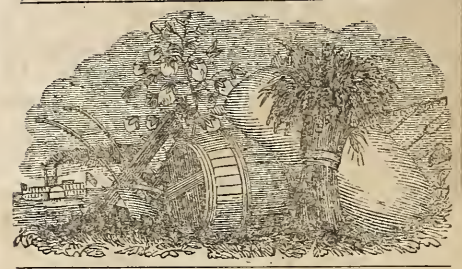
The question then arises, what shall we do with our manure? Why, sir, I would advise to put it where you sow rye or oats, and plough it under, and let it stay there, and sow grass-seed for your first crop, and smooth it down to meadow or pasture. Then you would have large crops of grain and grass for fodder and to make manure with, besides the compost heap. Then you will have a rich meadow pasture for your planting, instead of a plough-worn field that needs thirty or forty loads of manure to be fit to till.

[*Farmers' Gazette.*

Relief of Choked Cattle.—I find in your October number, a receipt by David F. Lott, to relieve choked cattle. I some months since sent to the Agriculturist, Nashville, a receipt, and in a few weeks after its publication, received the thanks of a gentleman, who, by using the prescribed means, saved a fine horse, after trying all other means recommended without effect. Raise one of the fore feet as the smith does when shoeing a horse, tie a strong cord, whip-cord or drum-line will answer, tight above the knee, while the foot is up; let the foot go, and if the animal refuse to put it to the ground, as it probably will, a smart stroke with a whip must be dealt, and in a second the beast is relieved; be careful in tying the string to tie a slip knot that you can loosen quick, for the pain is excruciating. How it operates is immaterial; my theory, probably a false one, is this: the hard cord, acting on the nerves of the arm, produces nausea, the muscles of the throat are relaxed, and the substance by which the brute is choked is thrown from the gullet. John A. Jones.

Fairie Knowl, Geo., 1842.

Cultivator.



WEDNESDAY, MARCH 1, 1843.

TO SOUTHERN PLANTERS.

In obedience to a promise made some time since, we have entered upon a new enterprise, and to-day send forth for your inspection, and, we fondly hope, your approval, the first number of the "Southern Cultivator." In commencing a work of such importance to the cultivators of the soil, we have been influenced by no other motives than to contribute our humble but zealous efforts to the restoration of the exhausted lands of the country, to introduce an enlightened system of agriculture, and to afford an acceptable medium for the interchange of views between planters, upon a subject in which all classes of society are so deeply interested. We have seen and felt the blighting effects upon the interests and independence of Southern planters, which have been produced by the too common and fatal system of Agriculture almost universally adopted, and it has long been to us a source of deep anxiety. To correct the evils of a system so long established and practised upon, and to introduce one better adapted to the wants and comforts of the whole population, we are fully aware, is a work of no ordinary labor, both physical and mental; but when we reflect upon the important advantages which a proper direction of our energies promises to develope to the great agricultural interests of the South, we enter upon the duties with the highest confidence of success, relying for aid upon those who have embarked in this valuable and interesting pursuit. To the Planters, therefore, of Georgia and the surrounding Southern States, do we appeal for aid in this enterprise—we ask not only their influence in circulating the work among all the tillers of the soil, but, as we hope and believe that it will derive its chief interest from an interchange of their views upon all subjects pertaining to agriculture and the general business of the farm, we invite their cordial and sincere co-operation in forwarding to us their views, and the result of experiments in every department of this deeply interesting branch of industry. It is our purpose to make the "Southern Cultivator" a work worthy of the great cause in which it is engaged, and to which it shall be specially and exclusively devoted, and we sincerely hope that no man who feels an interest in the introduction and promotion of an enlightened system of culture for our great staple products, will withhold his zealous support. With this brief introduction, we commit the work to the hands of those for whose especial benefit it has been undertaken, not doubting their readiness to unite with us cordially in a zealous and energetic effort to accomplish whatever the most sanguine friend of the cause may anticipate.

GIVE US YOUR AID.

This number of the "Southern Cultivator" will be sent to Postmasters, and other citizens, in every section of the State, and to many in the adjoining States, who are not subscribers, and we most respectfully ask them to exhibit it to their neighbors and friends, and solicit subscriptions. To all such as may receive it, therefore, we desire to say,

We send you the "Southern Cultivator," believing you feel a sufficient interest in the cause of Agriculture, to lend your aid in giving it a general circulation among the planters in your immediate neighborhood. The work, as its title imports, will be exclusively devoted to Southern Agriculture, and whatever pertains to the business of the Agriculturist, in all its varied departments; and, in order to place it within the reach of the most humble tiller of the soil, the subscription price is only ONE DOLLAR per year, ALWAYS IN ADVANCE. If it please you, sir, to contribute your aid, we shall feel grateful for the courtesy, and hope you will be abundantly compensated by the great good it will accomplish.

In presenting to the planters of the South, the first number of the "Southern Cultivator," which circumstances beyond our control have delayed to a much later period than we anticipated when our prospectus was first issued, we desire to remark, in all sincerity, that the very limited patronage as yet bestowed, is not sufficient to justify our making the work what we hoped to do when we determined to embark in the enterprise, and what every Southern man would be pleased to see it. To render it a work worthy of the noble cause in which it is engaged, and every way acceptable to the agriculturists of the country, much money must be expended in the procurement of drawings, and cuts of the various implements of husbandry and animals, necessary to be thus illustrated for the satisfaction of the readers of the work, and for the attainment of the greatest possible good to society.—Relying, therefore, exclusively upon the subscription list to be reimbursed in this expenditure, it is equally a matter of interest to us, as well as the patrons of the work, that it should have an extensive circulation, which can alone defray the expense. While, then, we assure those who have already promptly entered their names upon our list, that we shall proceed with the publication of the present volume to its completion, and shall devote our best energies to make it valuable and useful to every man who may read it, if he cultivate but a single half acre of land, though we add not another name to our list; nevertheless we submit to them, whether, as a matter of self interest, they should not use some exertion to obtain for it a large circulation.

CHANGE OF NAME.

Since our prospectus was issued, we have discovered that in adopting the name of "Southern Planter" for our paper, we have encroached upon the rights of our brethren of Richmond, Virginia, who publish an agricultural work under that name. We have, therefore, to avoid any such collission, adopted the name of "Southern Cultivator," which is equally comprehensive and adapted to the character of our work, in which name it will be published.

TO CORRESPONDENTS.

In another article we have invited our friends generally to furnish us with whatever they may deem of sufficient interest to the great brotherhood of planters to be published, and we trust that none will require a special or more particular solicitation; for while the "Cultivator" will be a medium of communication between agriculturists themselves, we desire to make it likewise so between our correspondents and ourselves, we shall thereby save much labor and avoid the expense of postage.

REPORTS OF THE MARKETS.

Since our prospectus was issued, the inquiry has been several times made of us, "whether the Cultivator would contain reports of the markets," &c.? to which we reply, that during the cotton season, which covers nearly the entire year, we shall regularly report the value of our great staple, together with such other information as we shall deem of interest to the planters—all of which will be collected from the most authentic sources. We shall also, in obedience to the suggestion of numerous friends, report regularly the value of money, particularly while we have a depreciated circulating medium in the State; but as we hope the day is not far distant when such a currency will be driven entirely from circulation, we think that such a report may, in a short time, be dispensed with; however, until it can be, we shall continue to give it, believing that no information is more valuable to the planter than to know the value of the money for which he exchanges the products of his labor.

HANCOCK PLANTERS' CLUB.

In another part of this paper will be found the report of the proceedings of this Club at its late Annual Fair, for which we are indebted to the Georgia Journal. In presenting this paper to the consideration of the planters of the South, we would most respectfully urge the importance of forming similar societies in every county, as one of the first steps in the great work of improving Southern Agriculture. Had we space, we would extend our remarks in support of the necessity for the formation of such societies, and the benefits which must certainly result from them, but for the present we are compelled to defer them, and in the mean time would suggest to the Executive Committee of the Hancock Club, the propriety of allowing us to publish their Constitution and Bye Laws, which we will do most cheerfully if a copy be furnished.

Errata.—In this article three errors appear, which were discovered too late to make the correction. Under the head "Swine," in the first line of the second paragraph, and in the eighth and eleventh lines of the last paragraph, the name "A. E. W. *Bonner*," and "Mr. *Bonner*," should be "Brown."

GEN. WASHINGTON'S LETTER.

We know not that we can render a more acceptable service to our readers than we do in presenting to them, in this number, the letter of Gen. WASHINGTON, which so happily illustrates the true character of the "FATHER OF HIS COUNTRY," and deserves to be preserved as an enduring monument of his true greatness.

☞The reader will perceive that we have been compelled to rely, for the matter in this number, almost exclusively upon our exchange list, which is as yet very limited. We hope, however, in our succeeding numbers, that our correspondents will enable us to present much original matter, and particularly adapted to the objects of our enterprise.

PLOUGHING UNDER CLOVER.—On reading in your number for the present month the inquiry of your correspondent of Selim's Grove, Pa., and your answer, on ploughing under heavy clover, I could not resist the inclination to tell you what I know about it. On experiencing the same difficulty mentioned by your correspondent some years since, I studied for and found a remedy, viz: to the beam of Prouty's or Ruggle's & Nourse's plough, attach a circular cutter 8 inches in diameter. In land clear of stone, a cast-iron one is as good as any. Mine is 1½ inches thick in the centre for 2 inches of the diameter; then ¾ of an inch, tapering to an edge. In stony soil, a ring of steel is made and put in the mould, and the centre cast on it. The pin in all plough-wheels should be cast steel.—I do not know but the "star cutter" I saw at your office would do, but think not. Near the end of the beam attach a heavy chain; the other end doubled on itself, should trail in the former furrow, and will bend the tops of any green crop so as to cover them. I have seen Moore & Barnaby's plough work. It does well, but not as smooth as either of those above mentioned. I think Yankee ingenuity could attach the wheel to that in such a mode as to do the work required. My plough does not clog twice in half a day on an average. The wheel walks directly through three inches of the surface, cutting all before it. JAMES BATES.

NORRIDGEWOCK, Me., Oct. 11, 1842.

[*Cultivator.*

MAKING VINEGAR.—We have never found any difficulty in making good vinegar from cider when we have drawn it from the lees after the fermentation was wholly over, and placed it in a place where the temperature was higher than it is in the cellar. Left on the lees, or in a low temperature, the acetous fermentation is rarely complete. If our correspondent will place his cider where the temperature is from 65 to 80 degrees, and draw a pailful daily from each cask, to be returned by the bung-hole; or if he will procure from a cask of good vinegar a quantity of the substance called mother of vinegar, and add it to a cask we think he will soon have vinegar. There are in London extensive vinegar factories managed in this way. The casks are placed on end, and the tops made full of holes. On each is placed a bucket or tub, containing about half a bushel of inferior or Malaga raisins. A man is constantly employed in passing around the rooms, which are heated to 75 or 80 degrees, drawing a pailful from the bottom and pouring it upon the raisins, from which it enters the cask. This gives the wine-flavor and body. If the cider is too weak, sugar is added. The vinegar is first-rate in a fortnight.—*Cultivator.*

CEMENT TO MEND BROKEN CHINA OR GLASS.—Garlic stamped in a stone mortar; the juice whereof, when applied to the pieces to be joined together, is the finest and strongest cement for that purpose, and will leave little or no mark if done with care.

CULTIVATION OF CLAY LAND.

Our principal object at the present moment, is to give some general directions for cultivation of clay lands, as they are usually found in this country, which are the results of long-continued, skilful practice of the best farmers. The most desirable improvement would be to alter the texture of this description of land, by the addition of a quantity of sand and gravel so as to modify the tenacious character of the clay. This plan, however, like that of under-draining, is too expensive for this country, except in the neighborhood of cities, where land is sufficiently valuable to justify the cost; and improvement in this way must be confined to such lands, or small patches elsewhere, where sand is convenient for the purpose.

Another mode of improvement, which to a certain extent, is within every farmer's reach, and is one of the legitimate objects of every good farmer's system, is to add large quantities of coarse, unfermented manure, and all his undecayed vegetables; which may be done on a large scale, by turning in matured crops produced upon the land. There is no danger of putting on too much manure of this kind, if buried sufficiently deep, in proportion to the quantity used. And there is as little danger of suffering any loss of the manure. It will last till exhausted by the growth of vegetation. Nor will it burn the land, according to the common phrase, as an excess of manure does on light and sandy soils. It is not carried away by rains, or evaporated by heat, but like coin, securely hoarded in a strong box, it is safely retained till the owner's key is applied to unlock it. The mechanical, as well as chemical character of this soil, particularly adapts it to the preservation of manures; for in addition to its strong chemical affinity for ammonia, which is the fertilizing principle in all soils, its mechanical structure enables it to hold, beyond the possibility of escape, all the animal and vegetable substances buried beneath it.

After doing whatever can be effected advantageously towards altering its character by under-draining, the next process is to put the surface into the right shape. This should always have some descent, sufficient to enable the water to pass off freely. When the natural surface has not declivity enough to effect the object, the land must be thrown into beds of 10 to 20 feet wide, with a deep, double furrow between each to conduct off the water, which falls from the more elevated surface; and the water accumulated in these furrows should be led away through some natural ravine or artificial ditch.

For all grain crops to be sown in the spring, the land should be ploughed the preceding fall. The following spring the grain may be sown directly upon the surface, and harrowed in and rolled, without allowing the plough to touch it. By this operation we have the bed in which the grain is to nestle, and from which it is to draw its future support, more finely divided by the elements, and the action of frost through the winter, than can be done by any instrument whatever, and no alteration of this handiwork of nature can be made out for the worse.

If corn or roots are required, the land should be half ploughed the previous fall; that is, a space should be left unmolested, of the width of a furrow, on which the upturned furrow is thrown. By this operation a large dry surface is exposed to the salutary effects of air and moisture, heat and frost; and it will be in the best possible condition for early tillage, and abundant crops. It will be mellow, friable, and comparatively dry, and by thorough cross-ploughing harrowing and rolling in the spring, it will be well fitted for the reception of the seed.

For winter wheat we do not think them suitable, unless prepared by thorough under-draining, as the wheat is very generally winter killed, or thrown out by the frost, or drowned by excessive rains, before the sun gets sufficiently high to protect it. But with the best varieties of spring wheat, it produces largely. For the production of rye, it is totally unsuited; but of barley, oats, peas, grass and roots, when suitably prepared, no soil produces better crops. Their chief value however is for grass lands, and when properly put down in meadow, they ought never to be disturbed, as with good management, they will be in a constantly improving state, and afford the most profitable and remunerating returns. But while in this condition, no animals should ever be suffered to graze them, and especially while the ground is soft. Poaching is destruction to them, and no scarcity of other food will justify the farmer in driving his cattle upon his meadows while saturated with water. It is a common opinion by those unaccustomed to them that clay lands will not produce good clover; yet we have never seen better clover, or larger crops, than we have repeatedly raised on them.

When required for roots, corn, or other hoed crops, the soil should be well charged with manure, and the most thorough tillage will be amply repaid. "A little land well tilled," has a peculiar signification when applied to this kind of soil. Plaster, (sulphate of lime) has no appreciable effect on it when applied in small quantities; and lime, (carbonate of lime,) has less than on any of the lighter soils. Ashes are valuable on any land, and, we believe, under all circumstances; yet we have repeatedly made the application of them on a very stiff clay, without deriving any immediate perceptible benefit. A longer time is required under certain circumstances, for them and other manures to act, but their action continues through a much longer period.—*American Agriculturalist.*

A CHEAP PAINT.—Take one bushel of unslacked lime and slack it with cold water; when slacked add to it 20 pounds of Spanish whiting, 17 pounds of salt, and 12 pounds sugar. Strain this mixture through a wire seive, and it will be fit for use after reducing with cold water. This is intended for the outside of buildings, or where it is exposed to the weather. In order to give a good color three coats are necessary on brick, and two on wood. It may be laid on with a brush similar to whitewash. Each coat must have sufficient time to dry before the next is applied.

For painting inside walls, take as before, one bushel unslacked lime, 3 pounds of sugar, 5 pounds salt, and prepare as above, and apply with a brush.

I have used it on brick, and find it well calculated to preserve them—it is far preferable to oil paint. I have also used it on wood, and assure you that it will last longer on rough siding than oil paint will on planed siding or boards.

You can make any color you please. If you wish a straw color, use yellow ochre instead of whiting; for lemon color, ochre and chrome yellow; for lead and slate color, lampblack; for blue, indigo; for green, chrome green. These different kinds of paint will not cost more than one-fourth as much as oil paints, including labor of putting on.

[*Ontario Freeman.*

BEES.—The best place to put bees in is a dry, cold and dark room or outhouse, if it can be obtained. The colder the winter the better, if the air is dry. Damp cold gives bees the rot. Put your bees there the last week in November, and let them sleep quietly till the flowers begin to come out in the spring. In Switzerland a whole village clubs together, and hires a cold dry room which they darken and put all their bees in.

We find the above in an exchange paper, and think the system recommended at least plausible. So long as bees remain torpid they do not eat; and to keep them in this state, the temperature of the place where they are kept must be low; it must also be dry, or the mass of bees and comb will become mouldy. Bees die in multitudes by being enticed out of their hives in sunny days, before they are able to obtain food, or get back to their hives.

[*Albany Cultivator.*

ANNUAL FAIR OF THE PLANTERS' CLUB OF HANCOCK.

SPARTA, November 4, 1842.

The Executive Committee of the Planters' Club of Hancock transmit to you, for publication, the following report of the proceedings on the day of their Annual Fair. The Club convened at the usual hour, at the Court House, and after the transaction of the ordinary business, formed a procession with the large concourse of citizens and gentlemen from neighboring counties, who were assembled to witness an exhibition so novel in its character to Georgians generally, and proceeded to the Female Academy, in which spacious building the crowded audience listened to a very interesting address, for more than an hour, delivered by the Hon. GARNETT ANDREWS, an honorary member of the Club. The utmost harmony prevailed through the day, and a laudable spirit of emulation and rivalry was manifested by the various competitors for premiums.

The following premiums and honors were awarded by the Club:

To Miss A. L. Kelly, for the best piece of domestic cloth for gentlemen's wear, a premium of $3.

To Mrs. J. P. Whitehead, for the second best do., 1st Honor.

To Mrs. R. S. Hardwick, for the third best do., 2d honor.

To Miss Amelia Kelly, for the best domestic Counterpane, a premium of $2.

To Miss Delia Kelly, for the second best, (wrought,) 1st honor.

Mrs. Whitehead exhibited a piece of very handsome black jeans, and Mrs. Hardwick some handsome vesting, and 9 lbs. of excellent butter.

To Mrs. Hardwick, sen., for the best pair of domestic hose, a premium of $1.

To Miss Rebecca Bass, for the best ladies domestic dress, a premium of $2.

To Miss Sarah Bass, for the second best do., 1st honor.

The above elegant dresses were made of silk raised by the family.

Three handsome capes were exhibited, the best by Miss Bass, the second best by Miss Smith, and third best by Mrs. Henry Griggs;—also, two Capes, the best by Mrs. Griggs, the second best by Mrs. Howitt;—also, two work pockets, the best by Miss Culver, the second by Mrs. B. Amos. Miss E. Sperting exhibited a very beautiful Cape, an imitation of fur, and a set of domestic bed-curtains. No premium was offered on the above articles.

Messrs. Watkins, Hart & Co., exhibited some very beautiful specimens of tin ware, and a superb bathing tub of the same material.

Mr. Howit, a pair of fine harness, and Mr. James Smith a dozen bottles of excellent wine, from the Scuppernong grape, and presented the same to the Club. Several agricultural implements were also shown. Among them a turning plough attached to an iron stock, by Mr. John T. Martin; one by John Mundain, designed for a wood stock, and by Mr. Wm. H. Sayre, a drill barrow, two harrows and a roller.

HORSES.

To Thomas Neal of Warren, for the best Stallion, by Pennoyer, his dam the celebrated mare Nubbin, a premium of $5.

To S. A. Pardee, for the 2d best do., Martin Jackson, by Jackson, dam Decatur, he by Sir Charles, 1st honor.

To Abraham Williams, for the 3d best do., by Jackson, dam by St. John, 2d honor.

To George W. Culver, for 4th best do., by Jackson, 3d honor.

Many other fine Horses were shown, but not for premiums, by their public spirited owners, of fine form, action and condition. Among them was Thomas C. Grimes' Tazewell, and a beautiful sorrel three year old colt, dam Miss Bethune, and sired by John Bascomb. Pennoyer, the property of Thomas Neal, sired by Sir Henry, dam Ariel; a handsome two year old colt by S. A. Pardee, sired by Tranby, dam the dam of Martin Jackson; a 3 year old Filly, by Seaborn Lawrence, sired by Barb, and dam a Florizel mare; a two year old bay Filly, by Andrew Bird, sired by Maxcy; a year old Colt by Mucklejohn, the property of Ellison Worthy, and another by Mr. Black, sired by Turk.

SWINE.

To Col. John Bonner, for the best Boar, Rip Van Winkle, a full blood Berkshire, a premium of $5.

To Mr. A. E. W. Bonner, for the celebrated Boar, Black John, a full Berkshire, 1st honor.

To Mr. James M. Hunt, for his Berkshire Boar, Bill, 2d honor.

To Mr. Jarard L. Turner, for his Berkshire Boar, Lafayette, 3d honor.

To Mr. James B. Ransome, for his Berkshire Boar, Toby, 4th honor.

To Col. John Bonner, for his Berkshire Sows, Nonesuch and Flower of Orange, a premium (divided) of $5.

To Col. Bonner, for Berkshire Sows, Black Rose and Kitty Clover—to Mr. Miles G. Harris, for his Berkshire Sow, Irone—to Dr. Alfriend, for his Berkshire Sow, Mary Black, the 1st honor.

To Col. Bonner, for his Berkshire Sow, Young Victoria, 2d honor.

To Capt. R. S. Hardwick, for his Berkshire Sow, Shakeress, and seven beautiful Pigs, 3d honor.

To Capt. Hardwick, for his Berkshire Sow, Sal, 4th honor.

Capt. H. exhibited several other Berkshire Sows of fine form. Various other young Sows were exhibited by different individuals of fine form and size, and so equal as to prevent an expression of opinion by the Club, as to their superiority. Among them were Col. Bonner's Berkshires, Sarah Fane, Myrtis, Betty, Mary, Peggy and Miss Ontario; Mr. Bonner's Berkshire, Jessie; two Berkshires by Mr. James M. Hunt, and two others by Mr. Bass, names not given; Mr. Bonner exhibited a beautiful young Sow, Crozett, a Berkshire and Neapolitan, and Col. Bonner a beautiful China, Anna White.

CATTLE AND SHEEP.

To Col. John Bonner, for his Bull, Sam Houston, 15-16ths Durham, a premium of $5.

To James B. Ransome, Esq., for his Durham Bull, 1st honor.

To Mr. Thomas C. Grimes, for his do. do., 2d honor.

To Capt. R. S. Hardwick, for his do. do., 3d honor.

To Mr. Grimes, for his Durham Cow, a premium of $5.

To Captain Hardwick, for his second best Cow, (and calf,) 1st honor.

To Col. Bonner, for the 3d best Durham Cow (and calf,) 2d honor.

To Capt. Hardwick, for best native stock, 3d honor.

To James B. Ransome, for his best year old Calf, one-fourth Durham, a premium of ——.

To Capt. Hardwick, for the best lot of Sheep, a Tup and two Ewes, of the South Down breed, was awarded an honor.

By order of the Executive Committee.

T. H. AUDAS, Sec'y.

DAIRY SALT.—Salt that is very white and fine in appearance is not unfrequently combined with other substances which injure its conservative powers; and hence that can only be relied upon which is prepared in such a way that a separation of these substances takes place previous to crystalization. In pure rock salt, nature has effected this separation perfectly; and where such can be obtained, and then ground fine, nothing as to the quality is left to be desired. The examinations made by our State geologists, prove, that next to this rock salt, (and vastly superior in strength and purity to the greater part of it,) is the coarse salt produced at the Onondaga Salines, by solar evaporation.—Thus Dr. Beck's analysis shows (see page 36, of the report for 1838,) that the salt made by solar evaporation at Geddes and Syracuse, contains 992 parts of pure chloride of sodium in 1000; while Turks Island and Liverpool fine salt gave from 984 to 988 parts in 1000. The fine salt put up as table salt, at Salina, exceeds the Liverpool in purity, and may be used in the dairy with perfect safety. But for a superior article, and one about which there can be no mistake, it is probable our farmers will find the salt made by evaporation, and then ground, the best butter salt that can be used; and we are confident if such salt was generally used in our dairies, the quality of their products would be most materially improved. Those who cannot obtain this salt, should use the best Liverpool fine they can procure, or purchase rock salt, clean, and grind it. This latter course, we understand, is taken by the Quakers at Fairfield, in Maine, the excellence of whose dairy products is admitted wherever they are known.

[*Cultivator.*

TOP-DRESSING.—We know of but few subjects of general discussion among farmers, in relation to which a greater diversity of opinion has been expressed, than in reference to the merits of top-dressing. Now it does, and indeed it ever has seemed to us, that the theory of top-dressing is correctly and philosophically based. And it was under this impression that we commenced, some years since, a course of experiments that has resulted thus far in a full, and as it seems to us, most conclusive corroboration of the verity of this belief. It is certainly the course which nature adopts in her operation, and in copying her example in this particular, there is obviously, we think, but little danger of going wrong.

In the autumn of 1840, we observed in the corner of one of our mowing fields, a spot which had become so thoroughly exhausted by long neglect as scarcely to produce enough to pay the expense of cutting. This place we at once determined to make the subject of an experiment, partly from our previous convictions of the utility of top-dressing, and partly from having recently witnessed the surprising effects produced by the droppings and stale of a few young cattle which had been permitted to feed upon some turnip tops that had been left at harvest in a contiguous field. Accordingly in the prosecution of this design we went to work and carted on to the worn-out and emasculated spot, nearly a dozen loads of old, well-rotted manure, being, as nearly as we could judge, from six to eight cords per statute acre. This was done the 20th of September. In the following spring the grass on the manured part of the field, took an early start, and at haying we had full a ton per acre, while the product of the other portions of the field which had not been manured in the fall, and which we had supposed were not sufficiently exhausted by cropping imperiously to demand it, did not exceed one-half that amount. Since then we have ever made it a standing rule to top-dress as much of our grass land in autumn as our circumstances will possibly admit.—*Maine Farmer.*

TERMS.

The "SOUTHERN CULTIVATOR" is published every other Wednesday, at ONE DOLLAR a year, INVARIABLY IN ADVANCE. The CASH SYSTEM will be rigidly adhered to, and in no case will the paper be sent unless the money accompanies the order.

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☞ POST MASTERS are authorized to receive and forward money free of postage.

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SOUTHERN CULTIVATOR.

VOL. I. AUGUSTA, GA., MARCH 15, 1843. No. 2.

RECENT AND EXTENSIVE MARLING IN SOUTH CAROLINA.

COLUMBIA, S. C., November 30, 1842.

DEAR SIR:—It affords me great pleasure to comply with your request, to furnish you with a statement of my marling operations during the first year, and the result of them so far as it has been ascertained.

I commenced in November last to marl my plantation at Silver Bluff, on Savannah river. There is no marl on the place. I procured it from Shell Bluff on the same river, and had to boat it twelve miles up the stream. It requires eleven prime hands to man the boat I use, and when the river is not too high they make two trips a week, loading and unloading themselves; They bring about 1100 bushels at a load. The marl is landed at a spot below high-water mark, and during the whole crop season two other hands and two carts are constantly engaged in hauling it to a place of security on the top of the bluff. At other times it is hauled directly from the landing to the fields. There are, however, thirteen hands and two mules lost to the crop.—My boat, which is a common pole boat, was built chiefly by my own people, and cost me about $300, including their labor. There have been incidental expenses to the amount of about $200 this year. During the year ending on the 8th of November, there were 85 trips made and about 93,000 bushels brought up. I think I can safely calculate on bringing up 100,000 bushels per annum hereafter, with the same force. I mention these facts that every one may form his own estimate of the cost of procuring marl under similar circumstances. My calculation is that it costs me about two cents a bushel delivered on my bluff. To one having marl on his own premises nearly the whole of this expense would be saved. I am enabled, by omitting to open new land, to haul out and spread this marl, without interfering with other plantation work, or lessening the number of acres planted per hand. In hauling out I have not been able to do as much as they do in Virginia. Mr. Ruffin, the author of the marling system, hauled 24 loads of 5¾ bushels with each cart per day a distance of 847 yards; I have done but little over half as well. I use mules, however, and the land being level, carried 6¼ bushels at a load. I found the mules could not stand trotting back with the empty cart. The marl weighs about 105 lbs. per bushel. My land was laid off in squares, so many to an acre, and a load dropped in each square. It was spread by hand; each negro taking his square, and carrying his marl on a board or in a small tray. A prime fellow can spread an acre in a day. But it is a hard task, and counting the gang round I have not averaged over half an acre for each worker. The marl spreads best when damp. It will then yield to the hand, and lumps are in general easily crushed.

Shell Bluff is a bold cliff on Savannah river, over 200 feet high, and, in some places, more than 100 feet perpendicular. Professor Vanuxem, who examined it some years ago, (see Farmers' Register, vol. vii. p. 70, and also vol. x. p. 487,) discovered fourteen varieties of marl, varying in quality from 37.2 to 93.4 per cent. of carbonate of lime. In using the marl I have excluded the inferior as much as possible, and have not found the very best in any great quantity.—I tested the quantity of carbonate of lime in one specimen taken at random from each boat load brought up this summer, and found the average of thirty-four loads to be 62.8 per cent., varying from 51 to 77. In every specimen there was a small proportion of oxide of iron, and clay and sand, usually in about equal quantities. There were, no doubt, other component parts which I did not ascertain; but I satisfied myself that there was neither gypsum nor magnesia. The marl presents various appearances, being in color white, brown, olive, yellow and violet, and in consistence from sand to soft stone. Some of it appears to be a concretion of shells from a size scarcely visible to the naked eye to an inch in diameter. There is no hard limestone, and it is doubtful whether any of the marl here will make lime, though it is an excellent cement. Much of that which I have used has been cut from the face of the cliff with pick-axes. It falls down sometimes in fine grains, sometimes in masses. At every handling it breaks up finer, and exposure to the air assists disintegration. I do not burn or pound it. Where it was spread last winter, an observer would readily discover it, and lumps as large as an egg, and occasionally much larger, are to be seen. A mere passer by, however, would not notice that the land had been marled. At every working it is more and more mixed with the soil. But I imagine it will be several years before it is completely combined with it, and until then the full effect of this marl cannot be known. A difference was apparent in this crop between the effects of that spread early in February and that spread in the latter part of April.

By the 22d of April last, I had marled 175 acres at the rate of 200 bushels to the acre. Of these I planted 50 acres in corn on the 17th of March, 50 acres in cotton on the 10th April, and 75 acres in cotton on the 22d April. These three cuts are in the same field, and adjoining, being separated only by turn-rows, yet the soils vary considerably. In the corn, I laid off four separate acres along the turn-row, as nearly equal in quality as possible. The one supposed to be the best was left without marl. The others were marled with one, two and three hundred bushels respectively. It was all of the same boat load, and contained 54 per cent. of carbonate of lime. This land has been in cultivation more than one hundred years. I have planted it myself eleven of the last twelve years, and sowed it in oats the other year. I have given it three light coats of manure, the last in 1839. It is a light, gray, sandy soil, of which the following was the analysis before marling, viz:

Water lost at 300 degrees	2	per cent.
Vegetable matter	3	"
Silica	80	"
Alumina	11	"
Oxide of iron	2	"
Loss	2	"
	100	

This cut was in cotton last year, and my expectation was, that with common seasons it would produce twelve bushels of corn per acre. And had I not kept the unmarled acre as a test, I should have set down all over that quantity to the credit of the marl. The corn came up badly, and suffered by the birds. The four experimental acres were cultivated precisely as the rest of the cut, and were distinguished only by the posts which marked the corners of each acre.—From the first, however, the marled corn exhibited a different appearance. It was stouter and of a much deeper color. As the season advanced, the difference became greater. The marled corn was as dark a green as swamp corn usually is. The fodder was pulled on the 3d of August, and after hanging two days and a half on the stalk in dry and rather windy weather, weighed as follows:

		Increase.	Per cent.
Unmarled acre	250 lbs.		
Marled at 100 bushels	285 "	35 lbs.	14
" " 200	" 314 "	64 "	25.6
" " 300	" 261 "	11 "	4.4

The corn was gathered on the 24th of October, being thoroughly dry and having shrunk as much as it would in the field. There appeared to be little or no difference in point of soundness. It was shucked clean and measured in a barrel. The unmarled corn shelled out two quarts less to the barrel than the marled. The following was the result:

		Increase.	Per cent.
Unmarled acre	17 bush.		
Marled, at 100 bush.	21 "	4	23.5
" " 200	" 21 "	4	23.5
" " 300	" 18½ "	1½	8.8

From this it would appear that 100 bushels of marl was as efficacious as 200, and perhaps in such land as this such may be the fact. It appears also probable that 300 bushels to the acre is too much. I ought however to state, that this last acre had a slight sink in the centre, and that the slopes around it are much thinner than the average land. These constitute about one-fifth of the acre, and were evidently injured by the marl. It was a bad selection for the heaviest marling; but at the time it was made I did not suppose, judging by the rates at which they marled in Virginia, that 300 bushels would injure any land. My fear now is that 200 bushels may prove too much for soil like this; and I have accordingly determined to put only 150 bushels on the acre hereafter, until I see its further effects. This has been a remarkable productive season for corn. I think the unmarled acre in this cut made at least five bushels more than it would have done of an average year. I presume the marled acres have done so likewise. But whether it would be fair to attribute any of the four bushels increased to the peculiarity of the season operating on the marl, I am wholly unable to decide. Supposing the increase from the season to be the same on the marled and unmarled land, and deducting five bushels from the produce of each acre, there will be 33⅓ per cent. in favor of the ten best marled acres. This, however, is all conjecture. The average per acre of this whole cut was eighteen bushels. The measurement of all but the experimental acres was made however by wagon loads, according to the usual plantation estimate, in which there is a liberal allowance for shrinking, &c. Had the whole been measured in the same manner as the experimental acres were, the produce would have appeared greater. I have had this cut planted in corn once before, but having been absent the whole year, no account of it was preserved, and I do not know what it produced.

I selected also and laid off separately four acres of cotton along the turn-row of the seventy-five acre cut of cotton. At the time I thought them nearly equal in quality, and the one supposed to be the best of these was left unmarled, and 1, 2 and 300 bushels of marl spread upon

the other three. It turned out however that the acre with 100 bushels was inferior to the average of the cut, while the other two were far superior. I was deceived by the stalks grown the year before. The two first named acres being somewhat rolling, and the year a wet one, they produced as good cotton as the other two which were flat. The unmarled acre was not much if any superior to the one marled with 300 bushels, save that there was a spot where fodder stacks had stood in 1838–9, which produced nearly double the cotton of any other spot of the same size in either acre, and added probably 30 lbs. to the amount gathered from that acre. The marl on these acres contained, like that on the corn cut, an average of 54 per cent. of carbonate of lime. This land is of the kind commonly known as *mulatto* soil, and was cleared at least as early as the corn cut. It was certainly planted by the Indians in 1740. The following was the analysis of it before marling, for which, as well as for the analysis of the corn cut, I am indebted to the kindness of Prof. Ellet:

Water at 300 degrees	3
Vegetable matter	4.5
Silica	74
Alumina	14.5
Oxide of iron	4

This cut was not planted until the 22d April, because it could not be marled before. A dry spell occurring immediately after, at the end of two weeks very little cotton had come up except in the marled acre, in which there was about half a stand. My overseer becoming alarmed in my absence, replanted the whole, and threw out the whole seed wherever it had not come up. This was done on the 6th May, so that the crop of this cut dates from that period, which is at least a month later than I should have preferred. For my experience is that early cotton, like early corn, is almost always the best. I consider the two weeks start which one half the unmarled acre obtained in this instance as of considerable consequence to it. These early stalks could be distinguished until the bolls began to open. The difference between the marled and unmarled cotton was as obvious as it was in the corn. The leaf too appeared broader and the stalk stouter from the first. The following was the production of these four acres. I state the production of all, though that of the 1 and 200 bushels acres ought not to be compared with that of the other two, on account of the relative inferiority of the soil.

The unmarled acre	1111	lbs.	in the	seed.
Marled do. at 100 bush.	846	"		"
" " 200 "	1003	"		"
" " 300 "	1318	"		"

The difference between the unmarled acre and that with 300 bushels of marl, was 17.7 per cent in favor of the latter. It would have been greater perhaps any other year than this, which has been almost as favorable for cotton as corn.—The average production of the whole 75 acres was 966 lbs. per acre. I have had this cut in cotton ten of the last twelve years; in corn one, and in oats one, and the following is a statement of its production of cotton for six of the ten years; that of the other years not having been preserved.

1833 av'ge pr acre in seed	731	lbs	manured	lightly
1834 " " "	784	"		
1835 " " "	951	"	manured	lightly
1836 " " "	451	"		
1840 " " "	497	"		
1841 " " "	500	"	manured.	
1842 " " "	966	"	marled.	

The other 50 acre cut of marled land planted in cotton on the 10th April. It came up in good time and was a fine stand. This is also a light gray soil, with less clay than the mulatto land, and less sand than the corn cut. It is probably as old as either, and has been cultivated in much the same way. Although planted ten days later than some other fields, and after all of them except the 75 acre cut, it soon appeared to be the oldest cotton, and certainly matured the earliest of any. Immediately after the cold weather, about the first of August, the rust commenced in it, and by the 20th of that month it had the appearance of a field after frost. Forms, small bolls, and even the leaves dropped. Most persons who saw it thought it had been cut off one half. I think myself it suffered to the extent of one-fourth at least. But I have made on this cut this year 840 lbs. of seed cotton, which is nearly 50 per cent. more than I ever had made on it before. The following is the average of its production for four other years.

1833 av'ge pr acre in seed	596	lbs	manured.	
1834 " " "	435	"		
1840 " " "	363	"		
1841 " " "	366	"	manured	lightly
1482 " " "	840	"	marled.	

I think the injury from the rust nearly or quite equal to the benefit derived from the favorable season. And that the increase from the marl was greater on this cut than on any other, because the earliest marled and most seasonably planted. The rust here was more injurious than in any other field, and I might have attributed it to the marl, but that the 75 acre cut, also marled, suffered least of all. I am inclined to think that the most advanced cotton was most affected, and the youngest least, and that marl had no influence one way or the other. It is worthy of remark, that while all my other cotton suffered from lice and the worm both, neither made their appearance on the marled land.

I have troubled you with this lengthy detail of my operations, because this being the first serious experiment with marl in South Carolina, (that I know of,) it may be interesting to those who have this earth within their reach, to know the particulars. From the facts I have stated, each one can form his opinion on nearly as good data as I can my own. I can only add that my expectations for the first year have been fully answered. I did not calculate on any of those magical results which agricultural experimenters so often look for, and so seldom realize to the full extent. I regard an increase of 20 per cent. as a very handsome return, and if it only does as well another year, I shall at all events be repaid for my labor, even if the beneficial effect of the marl ceases then. But the experience of all who have used it is, that it continues to improve the soil every year, until thoroughly disintegrated and combined with it; and that with proper culture it never declines from its maximum. Under these circumstances, and with these hopes, I shall continue myself to prosecute the business vigorously during the summer. I have hauled marl over 100 acres, and have now at my landing enough to cover 300 acres more. My great regret is that I did not engage in the business sooner. I have long known Shell Bluff, and for some years had heard of Mr. Ruffin's successful introduction of marl into the culture of Virginia. But I had not read his "Essay on Calcareous Manures," nor examined Shell Bluff, until the summer of 1841. The idea of obtaining marl from that spot was first suggested to me by my friend Mr. Dickenson, of Georgia; and after a careful perusal of Mr. Ruffin's Essay, and an analysis of marls there, I determined to try the experiment. I have, during the course of it, received much encouraging and valuable practical information from Mr. Ruffin himself, to whom, in common with all other beneficiaries of this inestimable treasure, I owe a debt of gratitude which cannot be easily cancelled.

I am, my dear sir, with great regard and esteem, your obedient servant,

J. H. Hammond.

Hon. Whitemarsh B. Seabrook,
President of State Agricultural Society.

[*Farmers' Register.*

To Destroy Ants.—Mix an ounce of powpered arsenic with a quart of water, boil it half an hour with some sugar, and place the syrup in small shallow vessels, oyster shells will do, in places infested by them. The sweetness attracts them, and the consequences are speedily fatal.

☞Salt is said to be good for hogs. It will sometimes restore their appetites when they have refused to eat. A little charcoal is good at times.

BOMMER'S METHOD OF MAKING MANURE.

We invite attention to the annexed Report of Dr. Beck, on Bommer's Method of preparing Manure. From a careful examination of the specifications and directions furnished us by Mr. Bommer, as well as from a personal examination of the process, from the forming of the heap to its opening, we are convinced that the method must prove valuable, and the manure so prepared of the best quality. There are many farms on which immense quantities of coarse grass, thistles, sedge, flags and other weeds, are annually grown, of which no use can be profitably made; all these, and with them the large piles of straw which are heaped round many barns to cause them to decay, may, by this method, be expeditiously and cheaply converted into the best of manure—the cost of the materials which the farmer will have to purchase being only from fifteen to twenty cents per cord, and the labor only such as is necessary to form a compost heap of any kind.

Report on Bommer's Process for Making Vegetable Manure, by Fermentation.

At the request of Mr. Bommer, the undersigned were present on the 14th of September, at the preparation of the materials used by him for making the above manure. As Mr. Bommer's process is patented, it will of course not be expected that the committee can go into details farther than what he himself makes public.—They have, however, no hesitation in stating that the materials mentioned in his specification were all used; that the experiment was in every respect fairly made; and that the whole is evidently conducted on the most approved chemical principles.

Two heaps were prepared; the first made of dry materials, principally straw of various grains, and probably weighing about 1,000 lbs.; the second was composed of ligneous vegetables, dry and green—such as cornstalks, potato stems, thistles and various other weeds. This weighed probably about 450 lbs. and was propped against the first heap.

The following table was kept at the request of the committee. It exhibits the degree of heat developed during the process of fermentation, ascertained daily by immersing the bulb of a thermometer in the centre of each heap.

FIRST HEAP—DRY STRAW.

					Dgs.
Sept. 15,	at	6	o'clock	P. M.	76
" 16,	at	7	"	A. M.	87
"	at	6	"	P. M.	90
" 17,	at	7	"	A. M.	96
"	at	6	"	P. M.	98
" 18,	at	8	"	A. M.	103
" 19,	at	5	"	P. M.	95
" 20,	at	7	"	A. M.	102
"	at	6	"	P. M.	107
" 21,	at	7	"	A. M.	113
"	at	6	"	P. M.	117
" 22,	at	7	"	A. M.	126
" 23,	at	10	"	A. M.	112
" 24,	at	10	"	A. M.	123
" 25,	at	10	"	A. M.	137
" 26,	at	10	"	A. M.	152
" 27,	at	10	"	A. M.	116
" 28,	at	9	"	A. M.	122

SECOND HEAP—GREEN STUFF.

					Dgs.
Sept. 16,	at	6	o'clock	P. M.	80
" 17,	at	7	"	A. M.	109
"	at	6	"	P. M.	127
" 18,	at	8	"	A. M.	161
" 19,	at	5	"	P. M.	136
" 20,	at	7	"	A. M.	152
"	at	6	"	P. M.	161
" 21,	at	7	"	A. M.	173
"	at	6	"	P. M.	178
" 22,	at	7	"	A. M.	184
" 23,	at	10	"	A. M.	142
" 24,	at	10	"	A. M.	157
" 25,	at	10	"	A. M.	182
" 26,	at	10	"	A. M.	201
" 27,	at	10	"	A. M.	138
" 28,	at	9	"	A. M.	146

The fermentation was discontinued September 28, when the heaps were opened for exhibition. The committee examined them on the 8th of October, and are quite satisfied that the result is a satisfactory one. The heap formed of 1000 lbs. dry straw was found to contain by measurement 225 solid feet, or one cord and three quarters, estimated to weigh 4,000 lbs. The material furnished must prove a valuable manure; and the more so, as it employs many articles now worthless or deleterious. In all matters of this nature, experience is of course worth more than mere theory; but it will be a matter of great disappointment if a process combining, as this does, an application of the most correct chemical principles, with the employment of the most efficient agents, does not in due time become a favorite with the farmer.

T. R. Beck, Ch'n.

Mr. Bommer states in his prospectus that the merit of his method essentially consists in the four following important points:

1. In being able to reduce in a short time all kinds of straw and ligneous weeds to a rich, unctious and durable manure, sueh as wheat straw, barley, rye, buckwheat and other black grains; stalks of Indian corn, rice and other plants; dried or green potatoe tops, leaves, stalks and roots of all kinds of plants; green or dried reeds, green rushes, sea weeds, sea rushes, heather broom stubble, in fact every thing belonging to the vegetable kingdom, and a great many other things lying about farms which are often allowed to go to waste. Even the ground itself may be converted into the best manure or compost.

2. In the combination or alliance of fecundating substances, the use of which when separated would not and could not produce the desired effect.

3. In the produetion of a very considerable quantity of factitious water, which when combined with other ingredients, forming lees, furnishes the farmer with a fertilizing liquid, the commixture of which in either vegetable or mineral substances, gives a manure of the richest kind.

4. In the production of a quantity of nitrate of lime and caustic potash; of ammonia and saltpetre—four substances which modern chemistry has found to contain the most fecundating properties possible.—*Cultivator.*

VALUE OF PLASTER.

The subjoined extract from a communieation, which appeared in the last Massachusetts Ploughman, speaks in just terms of the value of Plaster as a manure, and as the experience of the writer accords in results with our own, we give it insertion.—*American Farmer.*

"In passing through Pennsylvania, which I frequently did, I heard much said of the benefits of Plaster of Paris; a great many of the farmers, I was told, would come fifty miles to Philadelphia, in the time of last war, and give twenty dollars per ton for Plaster, and let their manure go down stream rather than to be at the trouble to cart it on their lands. I do not speak of this as approving of it, for I think every farmer ought to make as much manure as possible. I was told the way the Dutch farmers used it there was to sow clover and put one or two bushels of plaster to the acre and plough in the crop and sow wheat. I was informed in Baltimore, that a great deal of land on the eastern shore of Maryland, which had been worn out by raising tobacco and corn, had been reclaimed by the u % of plaster. Having got my ideas so raised, the first thing I did after I got a piece of land was to try it, and in three weeks after I applied it. On examination I thought as the Queen of Sheba did when she visited King Solomon, "the half had not been told me;" it was applied to a piece of loamy soil which had recently been laid down and one crop of hay cut from it, say half a ton to the acre. On the first examination after the plaster was applied, there was three times as much as when there was none. A part of this piece of land has been kept for a pasture ever since and never has been ploughed, and I think I can safely say there is not another piece of land in town that produces more feed. It has frequently been plastered since, and occasionally ashes have been applied as a top-dressing. The manure the cattle have dropped has every year been gathered up and put into the manure heap, so that it has no other dressing but plaster and ashes except the urine from the cattle.

Well, being so well pleased with the result of this small experiment, I tried it on a larger scale on my farm with as favorable results. On many places three bushels of plaster would make more grass grow than twenty loads of manure. I fenced off nine acres that had been fed very close by sheep for a number of years; this was the highest part where the sheep had generally lain through the nights; this was plastered at the rate of three bushels to the acre; the next season it pastured from May to September twelve cows, at the rate of three-fourths of an acre to a cow, and they had as much feed as they could eat, and on a great part of it we could have mowed a good crop in hay time.

From this time people began to use plaster considerably, and found a very great benefit from it; many of the old pastures which were covered over with moss, were converted into beautiful fields of clover; but strange to tell, just on the eve when our pastures began to be clothed with a beautiful verdue, and our farms bid fair to produce double what they were wont to do, there was a story got up by some gossip, which spread like wild-fire, that this plaster which had produced such wonderful effects was not what it was cracked up to be; that it would ruin the land if we continued to use it; if it did not happen in our day it would in our children's; that it would run our land all out and our children would become beggars. Now as this story, like other bugbears, has had its day, I find they are beginning very moderately to use it again. I hope that no farmer will rest satisfied until he has given it a fair trial; the expense is very trifling; at present I believe it can be bought for two dollars per ton; that it won't cost more than twenty-five cents per bushel, three bushels per acre, which is a great plenty; that the expense of manuring an acre is seventy-five cents, which will pay but a small part of the expense of carting on any other kind of manure if you had it given to you. Wherever the plaster will do any good it ought to be applied; and the only way I know of is to try it. On some land it will do no good I am confident. I had a large piece of plain on my farm, on which I could not see the least benefit from it; this was a deep black loam and rather moist; as soon as I went from this plain, over all the hills it worked wonders.

Yours, with respect,

Benj. Wheeler.

Farmingham, January 2, 1843.

DEEP AND SHALLOW PLOUGHING.

No question in agriculture, perhaps, has afforded a source for more conflicting opinions amongst planters and farmers than the necessary depth of ploughing. This fact itself presumes that the question is connected with things that are mysterious; or that general principles have been formed by some, under peculiar circumstances; and by others, under different circumstances; without respect to depth of soil or qualities of soil and subsoil, the preparation by the plough for cultivation, or its use in the act of cultivation. The object therefore of this article is to arrive at those general principles which will apply to cases under all circumstances, so that rules may be varied accordingly. The science of agriculture in this respect is like the science of medicine. That physician who undertakes to cure all diseases with one medicine may be set down as a quack; and he that does not use means according to the circumstances of the case in agriculture, is no less deficient in that science.

In order to investigate the subject fully, let us suppose different cases under their different circumstances, familiar to all intelligent planters, and from those facts deduce our arguments.

1st. Every planter who has any experience must know, that to a free soil, easy of cultivation, and to give free cultivation to the roots of most plants cultivated, there must be a suitable composition of sand and clay, in order that the soil may be sufficiently porous, and yet not too much so. If, therefore, the native soil is too sandy, and a clay subsoil is in reach of the plow, the advantage of deep ploughing to effect a mixture will be seen at once, so far as that object is concerned. Another fact known by agricultural chemists, that while silex is an essential food for most plants, potash is also equally essential as a food for all corn or grain plants cultivated. Professor Liebig has proven that all clays contain more or less potash, and all know that sand is chiefly silex. Hence the mixture must increase its fertility, as well as effect a more perfect consistency.

A 2d case. Let us suppose a soil of proper consistency and of sufficient depth to afford the moisture and play for the roots of the plants to be cultivated. To plough up extraneous matter not so rich in alkaline or earthy manures, and destitute of vegetable matter, must necessarily impede the growth of its plants. Out of the latter case we will suppose a

3d. That this virgin surface soil, (say 3 or 4 inches deep,) has been cultivated until exhausted of its potash, magnesia or other earthy manures, or either of them, as well as its vegetable matter. We may fairly reason, that if the subsoil furnished the earthy manures to the surface, there remains further supplies, and by adding vegetable or animal manures, and turning up the subsoil to the snows and freezes, as well as to the sun, to prepare it for action upon the roots of plants, restoration must be completed. And if the subsoil contained the necessary properties of alkaline or earthy manures, it is much easier to supply the defect by the plough, than the purchase of lime, plaster, or to haul from marl beds, except very near at hand. And upon this principle may be accounted how lands, originally rich, will regain their fertility by rest.—They promote a growth, the roots of which descend and gather from the subsoil its alkaline or earthy manures, the leaves and stalks collect carbon and ammonia from the atmosphere, and all returned to the surface restores a new soil.—If this can be effected by the plough and a native or cultivated growth in a few years, or by the addition of vegetable or animal manures mingled with the subsoil, why leave it (to the 2d generation) to restore itself?

A 4th case. Suppose a soil six inches deep, has never been ploughed more than three inches in depth, and that those three inches are now exhausted. It is evident that it is only necessary to turn up the lower coat and give it time for the action of the atmosphere, in order to restore it to the former production. It may be said, (if the land is rolling,) that this advantage is precluded by the rains washing off the first three inches.—In flat and level lands, however, this is not the case. Out of this arises another question or case.

The 5th. Suppose a soil six or even twelve inches deep, in its fresh state. Should it be ploughed as deep as the soil extends? Answer—Experienced planters know that the roots of corn and cotton, if not small grain, will run a foot deep, if the lands are broken up that depth, especially if ploughed once as deep after planting. It is also known that soil, however fertile, that has remained excluded from the atmosphere too deep, will not bring its nutritious qualities to bear on most plants cultivated. It therefore follows—that if the roots of plants have twelve inches of soil to feed and branch in, they must have more food, more room, and more moisture, and therefore a proportional increase in production.

A 6th case. Suppose a Spanish oak ridge, with a growth of green brier and shrubs, indicative of poverty, with not over an inch of vegetable soil upon it. What depth should it be plowed? To plough such a thin skirt of soil six to eight inches under, the plants would perish be

fore their roots could reach the scanty supply of food, and at once add death to poverty. By shallow ploughing, and wet seasons, a little may be made, but it would prove lost labor to plough in the best way. If level, it may however afford a good foundation to locate a soil, by hauling it from steep and rich neighboring hills; and perhaps an inch of the native earth might aid in the composition. If analyzed, it might possess some one or two properties of earthy manures, and if that was known, and the others added, fertilizing would be less expensive and more certain.

A 7th case. Suppose a rich alluvial soil is deposited upon a sand bar, and that this stratum of soil was five or six inches deep. Would it be safe to plough through it? By ploughing thro', it would give the roots an unprofitable access to the barren sand, open the way for the rich soil to sink, and effect an unprofitable mixture, and most of alluvial soils are of a good composition. If not, it might prove safer to add to than to break through the soil.

An 8th case may be supposed by reversing the 7th. That is, suppose a sand bar of 6 or 12 inches deep covers a rich black or blue clay or mud. Experiments have tested that by ploughing up the clay the most fertile and productive soils have been made in bottom lands, especially where the stratum of clay was the original soil.

Many other cases might be supposed connected with other peculiar circumstances. Enough however is written to establish this truth—that circumstances must vary cases even in different parts sometimes of the same field. And to contend for deep ploughing indiscriminately, would be, as said, like a quack using one medicine or course of practice to cure all diseases. The above remarks, however, are only intended to apply in the preparation of lands for cultivation, and not to the ploughing of crops, when planted. As circumstances will there be again different, that part of our subject will be reserved for a future article.

We have shown that the depth of ploughing in fallow lands must be regulated by the different circumstances of soil, subsoil, &c.—The same circumstances must not only have their bearing in cultivation, but others necessarily arise, which must still change the depth in ploughing. The objects of fallow ploughing were to improve the soil by admixture with the subsoil, and exposure to the winter or spring atmosphere, as well as to pulverize it. The last object of the three is still to be kept in view, while the other two have accomplished their ends. Science has taught us and facts bear testimony, that exposure of subsoil to a winter atmosphere collects carbon and nitrogen, and to a summer atmosphere causes evaporation. Another item in fallowing is to turn the grass and weed seed under deep enough to prevent their coming up, which, if avoidable, should not be raised on the surface again. The chief objects in cultivation are therefore to pulverize, to kill grass or weeds, and according to the nature of the plant cultivated, to hill up. If the soil is sufficiently porous, that circumstance should be kept in view. If too porous, that should have its bearing. Let us suppose, in the first place, that the fallow ploughing has turned up a turf or sod four or six inches deep. It will follow of course, that in the first ploughing for cultivation this turf must be broken and crumbled its full depth. And to carry out the principle laid down, the plough should be constructed so to work as not to reverse the surface again, which may be effected by a long narrow pointed shovel. This being done as a first ploughing after planting, a question now arises—is the object of pulverizing sufficiently effected, so as to render any further labor unnecessary upon that score? In sandy or porous lands, there can be no doubt upon this question. But even in stiff clay lands, experimental facts can be adduced, made in different seasons, to prove that two ploughings 4 inches deep, will secure moisture and porosity sufficiently for the roots of corn or cotton to play as deep as ploughed that year. In stiff lands, heavy rains may cause a crust one or two inches on the surface. Now as all experienced planters know that lands may be easily made too porous, and that a certain degree of solidity is necessary to protect the roots of plants from a cold atmosphere, and the burning rays of the summer's sun; when the true object is effected, an injury will be sustained, if carried too far; or to say the least, the labor is lost. Tow-thirds of our planters, however, will urge that clay lands will (to use a common phrase,) cake after every heavy rain. But this error arises from the fact that the first ploughings have not been over or very little over two inches deep; for if those who are thus deceived would throw off the loose earth around a furrow, and measure the solid part perpendicular, they would discover a mistake in the supposed depth. And it is certain that old stiff lands, not ploughed over two inches deep, will consolidate as deep after every heavy rain. If these premises are sustained, the only remaining object as far as pulverizing is to effect any good, is to stir the surface crust, if formed. But here, at least, one half of our planters will say, the roots of corn and cotton ought to be cut to make a better production.—And it is not hard to account for this corn and cotton destroying mistake. The first ploughings as the earth was hard and the ploughs unfitted for the purpose, have only effected a kind of scarification of a deep soil; the roots are of course confined on the surface, and if ploughed at all must be cut any way; it is therefore better to plough deep now than never, even for the wounded roots to have depth of soil to branch in, than to leave them uncut, to perish on the surface, for want of soil and moisture. It is argued sometimes that roots should be cut upon the principle of pruning trees, vines, &c. But if we argue upon this principle of nature, it goes to condemn the practice. We cut the top that the roots may be better enabled to sustain the remaining top. And to test the principle, let a young plant of corn be drawn up in a wet season and transplanted, and in two cases out of three an ear will never be produced of any size; yet, let the frost or an animal cut down the top when young, and the ear will be equally good. Further, if a young tree is raised and transplanted, the more root left the more certain and rapid the growth of the tree. If any, however, still doubt upon this question, let them make a fair experiment by ploughing from four to six inches deep, according to the soil, &c. the two first workings; and after one or two inches deep, taking care not to cut the roots by the hoe in hilling, selecting two acres with equal advantages otherwise, cutting the roots of one, and avoiding the other as far as practicable. And results must vary from experiments made by others, or proof will be afforded to settle the question.

If this question be established, the only remaining object in the next two ploughings (making 3 in the cultivation,) should be directed upon the plan calculated to pulverize the crust, and kill the grass most speedily. And for this, one eagle plough is worth two, (if not three,) of the widest and best shovels. What we call the eagle plough about Monticello, is not what is called the scraper, or the clumsy imitations of the eagle plough used in many sections of the State; but a plough which finishes a middle of 3½ feet, (it of equal distance) by one furrow; or a 5 feet middle by two furrows; without running over one, or one and a half inch, in depth.

This plough, if skilfully made, set and managed, will kill grass more effectually than a shovel; leave the middles in a better state for the roots to have play upon all the soil; the middles less liable to wash; by running two furrows in a middle, hill up corn or cotton, so as to cover grass in the drill; and yet not heavier in draft than a wide shovel.

Much more might be written upon the many important circumstances and principles, connected with this subject; but enough for the present object of this article; which is not only to afford the advantage of the experience of the writer to young planters, but to draw out the experience and discoveries of others, which may go to confirm true principles, and to correct any errors advanced; for the grand object of agricultural societies and papers, is or should be, to collect and treasure up the wisdom of the many, and to encourage all to further discoveries.

MONTICELLO.
Temperance Advocate.

HOW TO MAKE A LARGE COTTON CROP.

Extract from an article published in the Albany Cultivator.

This improvement, when it shall have attained its highest state of perfection, contemplates the "*system of rotation*" in planting, under which the land designed for cotton lies the previous year in the state of fallow, which is found by experience most favorable to the growth and fruitfulness of the plant. I commence the preparatory operations for planting about the 1st of March, by spreading upon the land *broadcast* two to three hundred bushels of manure per acre—light stock yard and stable compost. I then run off the land in rows of three feet with a scooter plow, opening a good furrow some three to four inches deep; this done, I take a large sized shovel plow and cross the scooter furrows by rows, running at right angles, of five feet wide. I am now prepared to commence manuring in the hill, having first ascertained that I have 2940 hills on each acre, which will require, by giving each hill a half gallon of manure—same kind of compost—184 bushels nearly, which I haul on the land in a cart, first graduated to a certain number of bushels, and with spades likewise prepared for the purpose, I deposit the requisite quantity of manure in each hill. By this means, which in practice will be found simple and expeditious enough, I give four to five hundred bushels of manure to each acre—*an infallible insurance* for 5000 lbs. of a superior staple per acre. As the manure is placed in the hill by rows, the wide way, a short distance in advance, a *good plow hand* follows with a turn plow, which should run into the soil from *six to eight inches deep* at least, and turn well, with which four furrows are thrown together on each row: thus fixing the half gallon of manure in each hill, entirely within the *region of constant moisture*.—This gives me a fine, large bed, and well broke, to lie until at or about the first of April, when the cotton seed should be planted. This is done by first opening the bed as shallow as possible, with some instrument such as that described by M. W. Philips, Esq. in the March number of the 9th vol. of the Cultivator. This I prefer to any other instrument of the kind I have ever yet seen, since its depth of furrow may be graduated to a positive certainty so as to avoid disturbing the manure in the hill; it should not be opened out deeper than one inch. The bed thus opened, and the seed previously rolled in leeched ashes or sand, which answer very well, though I prefer a compound of two parts of ashes to one of common salt made moist with water; the seed, well rolled in this, are carefully dropped over the manure. Eight or ten seed in a place will answer to secure a stand. There will be no difficulty in dropping the seed over the manure in the hill, when it is recollected and observed that upon the unbroken space of some two feet between each row, the scooter furrows will be found an unerring guide to the manure in the bed at distances of three feet. The seed thus dropped I prefer to have covered with a hoe, *lightly and carefully;* bearing in mind this golden truth, that "a crop well planted is half made."—Immediately after planting, the middles or unbroken balks should be plowed out. The crop of cotton thus planted, which should not exceed *three to four acres* to the hand, may be performed in good time and well done. In a few days, say nine to twelve, the cotton will be up, presenting a most healthy and thrifty appearance. The next operation to be performed, as early as possibly convenient, is to plough out the middles *well*, the wide way, with a good shovel plough, having first run around the young plant with a scooter plough. The hoe hands follow and thin the cotton down to two stalks, giving it a small quantity of soil. This operation *well done*, the

plant is at once placed beyond all danger, since its tap-root will now have taken such hold upon the manure below as to enable the plant to outstrip either grass or weeds, having yet to spring up.

Under this treatment, the *time-consuming* and worse than useless operations of *bar-shearing, scraping* and *chopping out* are saved, as much to the benefit of the tender plant, as to the interest and economy of the planter, in despatching the *hurry and push* at this stage of the crop; and at the conclusion of this first working, I have my cotton growing off and doing well. I have now no further use for a plough in its subsequent culture, but use the *sweep*—a kind of horse-hoe—I call it a sweep in the absence of a more appropriate name.

[Here follows a wood cut representation of the sweep, a kind of plough used by some planters at the South. The one here recommended is made by welding two narrow wings over the point of a scooter or bull tongue, inclining backwards, with the ends of the wings two feet apart. It is so fixed upon the stock (that of a common shovel plough) that it will not enter the ground deeper than one inch, if so deep.]

The great and singular advantages of the sweep over all instruments of the plough, harrow or hoe kind that I have ever used, are these —that it will *kill* a greater quantity of grass and weeds in a given time, and *do less injury to the surface roots* of the plant, *so essential* to its *progressive* prosperity. The hoe-hands following this instrument, thin the cotton to a stand, *one stalk* in a place, and draw up a small quantity of soil to the standing plant. The entire subsequent culture is performed with the sweep and hoe, which should simply scrape and pulverize the surface, so as to kill any grass and weeds that may appear, and allow a *free circulation* of atmospheric air to the fibrous roots of the fruiting stalk, requiring at this *critical period* all the aid and nourishment that culture, soil and atmosphere can afford. By the first of July my cotton stands from five to nine feet high, and I have it topped by the 10th at farthest, after which I run the sweep once through it, and the hoe if necessary, to remove any grass that may have sprung up immediately above the stalk. After this, and by this time frequently in places the cotton will be so much interlocked, and the ground so shaded, as to keep down all other vegetation—yet it may be found necessary again to chop about in places with the hoe, when the cotton may not have locked so early. This should be invariably attended to. This brings us again to the season of harvesting the staple.

Let no planter prejudge and reject this system, upon the score of simplicity, supposing the process too simple to accomplish the object proposed; first, act wisely, make the experiment and try it. Strictly follow this plain and simple process, and if the land does not reward your painstaking, with *five or six fold the quantity per acre*, of a *superior staple*, than has at any previous season been taken from it, in its natural state, I will present the experimenter with *one bushel* of my *improved seed*, with which to perfect the experiment. At another time I propose devoting a paragraph to the importance of *selecting and improving* cotton seed.

It will be observed that manuring constitutes a large item in this system of improvement, a source of revenue too much underrated by planters, and consequently too much neglected, because the subject requires a little extra attention —which attention is so essential to the prosperity and well-doing of a farm. Nor, gentlemen, have I seen any thing better said, or more true, than I find in the sentiment, under the head of "*a few queries*," in the last December Cultivator, where you remark to the planter and farmer: "In your manures is your *gold mine*, more valuable than any of the Carolina ones, and you should be anxious to increase them accordingly." But I hear some planters say—"it is impossible to produce so much manure"—this is, however the result of inexperience, and the want of *determination*. I am entirely convinced, from my experience in making manure, that it is not only practicable, but a perfectly easy task to prepare, upon every plantation in the cotton region, great or small, 1500 *bushels* of an excellent article of compost, per annum, to the hand—at a cost of less than two cents per bushel—by the assistance of the stock of horses, cows and hogs, upon properly arranged lots. This is done by having the lots well littered, by throwing in pine straw, in large quantities and frequently, or oak leaves, where the pine straw is not to be had, with cotton and corn-stalks, &c., and occasionally haul and scatter upon the litter a few loads of muck or marl, one or both of which may be found on or near every farm in the country; upon these lots, pen and feed your stock every night. The manure thus prepared, should be collected in pens or pits, three or four times during the year, after heavy falls of rain, and the lots replenished with pine straw, &c.—by this means a very large amount of manure is collected during the season, and that too, at an inappreciable cost.—Again, we have another difficulty; there are but few persons who believe that pine straw can be converted into manure; for the benefit and information of such, who may read this, permit me to quote a single sentence from Liebeg's celebrated work upon Agricultural chemistry.—"The bark and foliage of oaks contains from 6 to 9 per cent of potash. The needles of firs and pines *eight* per cent." But it is not on account of the potash exclusively, that I prefer pine straw, to all other vegetable matter, in the preparation of manure—since it possesses another invaluable quality above all others, in absorbing the juices of the manure, which are thus saved from evaporation, and readily applied to the land. I doubt not but a single year's experience will convince every intelligent planter of the innumerable advantages of this improvement, and its perfect adaption to the culture of cotton and other crops.

I will now close this number by a very few remarks upon the character and quality of the soil upon which my experiments have been conducted. It is a high ridge land, readily recognized, and its quality distinctly understood, in our southern country, under the name of "*forked-leaf, black-jack, pine-barren*," a deep, porous, sandy, superstratum, lying under a tolerable good clay, at a distance of two to three feet below the surface. A true picture of nature, and naturally poor enough. This land, under the treatment above detailed, grew my cotton, from which I have gathered a greater number of pounds per acre, (indeed almost double,) than I have ever seen recorded, is in its natural state, inferior to the average quality of cotton land, by at least one half. I might refer you, if necessary, to more than one hundred gentlemen, planters from Georgia and Alabama, who have examined my experiments carefully, and several of them at various stages of its growth, and with one general consent, pronounced it a fair test, and a great improvement. I have, from several stalks that grew on the three acres, in the proper places, taken 3½ to 4 lbs. of cotton, *carefully weighed*.—In the perfection of this improvement, yet in a state of great crudeness, when every stalk upon the acre (2940) *shall mature equally well*, what may I *reasonably* calculate to gather?

"——Nil desperandum,
Possunt quia, posse videntur."

N. B. Cloud, M. D.

Planters' Retreat, Ala., Dec. 26, 1842.

Infallible Cure for a Foundered Horse.—If your horse founders over night, in the morning take a pint of hog's lard, put it in a vessel and make it boiling hot, clean his hoofs well, set his foot in the lard. Heat it for each hoof boiling hot; take a spoon and put the fat over the hoof as near the hair as possible, and he will be fit for use in three hours if it is done early in the morning. It is better to remove the horse's shoe, but I have made several cures without. I have tried this on many horses during a period of fifteen years, and have never failed.

Lime for Fruit Trees.

The suggestions below as to the use of lime around fruit trees, are worthy of attention. In the autumn of 1841, we laid bare the roots of a number of unthrifty apple and peach trees, and left them exposed during the winter, returned the dirt in the spring, and applied to the roots of each tree about half a bushel of gas lime. Last year the trees seemed greatly improved, and the pears bore more than three times as much as they did the two previous years; the limbs had to be propped up, and the fruit seemed improved. We treated some old genuine trees in a similar manner, and the influence was obviously beneficial. Ashes are a good substitute for lime, and ordinary lime would probably do as well as the gas lime. Exposing the roots of trees occasionally during winter, it is well known, is very beneficial.—*D. Farmer.*

"The Peach Tree.—I have perfect faith in the beneficial use of calcareous substances applied to the roots of trees, sensible, as one of your correspondents has observed, that 'oxygen is the basis of acidity,' with which all putrid substances are charged: and it is with this view that Maj. Reybold, of Delaware, that first of cultivators of the peach, for he and his sons, and sons-in-law now number 78,000 peach trees planted in orchards, is at this time actively engaged in dressing his trees with shell-marl; by depositing a quantity at the root of every tree, to be pulverized by the frosts the ensuing winter. He also cultivates his orchards with the plough; turning a shallow furrow over the whole surface of the land, three times during the summer, a weighty affair, seeing that one of these orchards contains more than 100 acres; by these means he conceives that he renovates the land and benefits the health of the trees, which are indeed in full vigor, although many of them are very old, and the size of some apple trees of mature growth. I remember also that Mr. Dager, one of the proprietors of the lime quarry, mentioned at page 309 of the 4th vol. of the Cabinet, the lime from which was proved by analysis to yield 96.6 per cent of carbonate and not a trace of magnesia, increased the size of the fruit of an apricot tree three fold, by digging in around its roots a quantity of lime, adding also to its flavor in an equal degree. A. T. B.

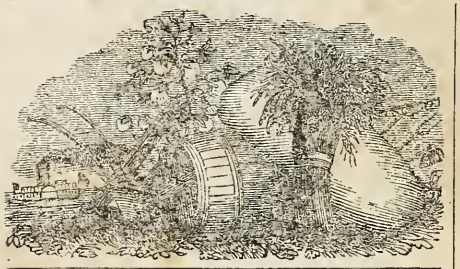
November 22, 1842.

Lime and Marsh Mud.—A gentleman distinguished for good and great qualities, tells us, that on a sandy soil, he has found lime a powerful fertilizer. A poor field put in corn—yield ten bushels—followed by oats--crop light--succeeded by wheat—yield not more than the seed—limed, and next crop gave 40 bushels to the acre. Experience has taught him the great value of *marsh mud*, especially when used in combination with a small quantity of lime. Keeps a small force especially assigned to the collection of marsh mud, weeds, leaves, mould from the woods, &c., and is amply compensated for it—cannot too highly recommend the use of marsh mud—has covered several acres with *brushwood*. The fertilizing effect very obvious, and thinks poor land may be reclaimed by a covering of brushwood, very speedily, and with great economy as to the labor and the results—is very careful to have all brush not large enough for fire wood, even the pruning of his orchards reserved to be spread upon the most exhausted portions of his land.

American Farmer.

Pruning.—Apple trees ought not to be pruned until the last of May or June; in the winter or until the last of May they ought not to be touched, and ought to be cut very close to the limb, the one cut from, or close to the body of the tree. The wound heals up immediately if cut off in May.—*Tennessee Agriculturist.*

Durable Rails.—Rails ought all to be split in April or May, when the bark will peel off the tree, and then the sap rails will last as long as the inside heart rails will. This is material to know.—*Tennessee Agriculturist.*



WEDNESDAY, MARCH 8, 1843.

TO SUBSCRIBERS.

We are frequently requested, by subscribers, to send them receipts for their subscription money. This is unnecessary, for we adhere strictly and rigidly to the CASH SYSTEM, and when the paper is sent it is conclusive evidence that it has been paid for.

☞ The delay occasioned in getting out our first number, has induced us to make an effort to issue the "Cultivator" weekly until we make up for the lost time, so as to make our volume end with the year, which is the most convenient season for subscribers to renew their subscriptions. When we have caught up, our issue will be regular every other Wednesday.

TO CORRESPONDENTS.

We must renew our entreaty to our friends to give us their views on all subjects pertaining to the business and system of agriculture. We are fully aware that many practical farmers, who are not in the habit of committing their views to writing, are in the possession of many valuable facts, the results of long experience, which if given to the public through the medium of the "Southern Cultivator," could not fail to be highly beneficial to the cause of agriculture, and we sincerely hope they will be prevailed on to furnish them for publication.

BOMMER'S PROCESS OF MAKING MANURE.

In obedience to the wish of an esteemed friend, we have transferred to our columns all the information we have been able to procure in reference to this important subject—which, we confess, is by no means satisfactory. This arises from the fact, that Mr. Bommer has obtained, from the government, a patent for his process, the secret of which is consequently with himself, and will be communicated alone to those who pay for the information. The favor with which it has been received by the committee, whose report will be found in this number, will certainly induce many planters to make the experiment, the result of which, when obtained, we shall take the earliest occasion to lay before our readers.

IRISH POTATOES.

The great value of this vegetable has induced us to present to the reader, in this number, the suggestions of several practical men upon the system of culture, as well as the best species of potatoe, which we commend to the consideration of all those who, like ourselves, feel that it is rather humiliating for us to import from the North and abroad such a large proportion of our consumption. The impression that the potatoe deteriorates in our climate after a few years, is, to a certain extent true; nevertheless our climate and soil are capable of producing a much better article than is generally found on our tables of home production, if the most approved system of culture be adopted.

COTTON CULTURE.

Cotton planters are referred to the extract of the letter of Dr. CLOUD, of Alabama, to the editor of the Albany Cultivator, on the subject of improving the culture of cotton. The writer assumes to speak from a practical experience of his system, and we hope that many of our cotton growers will test the experiment, to a greater or less extent, this season, as it is not yet too late. Many may cultivate one acre, and others can make a trial on a half or even a quarter of an acre of land, situate in a cotton field, which will satisfactorily test it as compared with the usual mode of culture. It is true the experiment of Dr. C. was made in a climate and soil, both better adapted to the culture of cotton than many portions of Georgia, yet if we can succeed in producing half the amount suggested by him, which to us seems rather extravagant, it will be a very important improvement, and worthy the consideration of every cotton planter, who by his present system of culture is impoverishing rather than improving his lands.

Messrs. EDITORS—We think it can be clearly shown, that labor can be more profitably employed, at present, in the improvement of the soil than in the cultivation of our great Southern staple. And by way of illustration, we will have to assume a basis, that four hundred pounds of cotton, or ten bushels of corn, is a fair average per acre for all the lands in middle Georgia; and the value of field labor is about fifteen cents a day, which is rather above the true value; and further, that land which will produce the amount above specified, is worth five dollars per acre.—Now we hold it true, that if an acre of land which produces, in the ordinary way of cultivation, five hundred pounds of cotton, or ten bushels of corn, is worth five dollars, an acre of land which will produce one thousand pounds of cotton, or thirty bushels of corn, would be worth fifteen dollars. We now propose to show, from the positions taken above, that by expending three dollars and ninety cents on an acre of common land worth five dollars, we have increased the value to fifteen dollars—thus realizing a clear profit, in the increased value of the land, of six dollars and ten cents, from a month's labor bestowed upon improvements, which is nearly one hundred per cent above the value of labor employed upon our farms in cotton culture. And that this will be the result, is clearly shown wherever the matter has been fairly tested.

But I think I have placed too low an estimate upon the production of an acre that has received a month's labor in improving; and in favorable years we should expect fifteen hundred pounds of cotton or forty bushels of corn. If these conclusions are correct, I think I have clearly demonstrated that labor employed in increasing the value of land, can be nearly doubly as profitably employed as in the growing of cotton. I know I have long established prejudices to combat, and plans that have grown old to contend with. Most of our planters say the thing is impossible; they have tried, and a complete failure has been the result. We think we know how the experiment has been made, and why there has been a failure: they have employed one hand and a team for six days in the three hundred and sixty-five in hauling manure, which, from exposure to the weather, had lost most of its valuable qualities; and this six days' labor was directed to a field of sixty acres. No wonder that what had been done would as well have been left undone. But this is not my plan. Bestow a month's labor on an acre in manuring, and if results even greater than those of my estimates are not realized, I shall in future cease to be a prophet.

In no instance where the experiment has been tried, has there yet been a failure; but results far above my estimates have been fully realized. We hear of more than five thousand pounds of cotton grown from an acre, and one hundred bushels of corn; and I have no doubt, if there was a premium offered for the greatest product per acre, either in cotton or corn, that many acres in Putnam county would grow over two thousand pounds of cotton, or fifty bushels of corn, where now not more than one-fourth is produced. But as no premiums are offered, I challenge any planter in Putnam county upon one acre of common upland to be grown in cotton the present year, to be submitted to the test of examination and admeasurement.

AGRICOLA.

Clopton's Mills, February 14, 1843.

Southern Recorder.

MORGANFIELD, UNION COUNTY, KY., January 9, 1843.

To the editor of the Louisville Journal:

GENTLEMEN:—Some time last winter, a number of farmers of this county, in the neighborhood of Mr. Milton Young, formed a society for the promotion of the farming interest, under the style of the "Union County Prize Association." One of the objects of this association was to test the fattening qualities of their hogs, and on the 19th of February, 1842, twelve of the members of the association met and agreed that each one of them should put up a pig, and the one who could make his pig gain the most flesh from that time until the 9th day of January, 1843, was to be entitled to the whole number put up. They accordingly went round to each of their respective houses on that day, weighed and put up their pigs.

Pursuant to the regulations of the association, the pigs (or as I may now term them, hogs,) were all slaughtered at 10 o'clock this morning and taken to Mr. Milton Young's, the place designated by rule of the association, and weighed at 12 o'clock by Mr. Aaron Waller, Leonard Clements and myself; and, by request of the association, I herewith transmit to you, for publication in your valuable paper, a statement showing the weight of each pig when put up, as well as the weight and ages of each when slaughtered.

Some of the members weighed their pigs for two or three months, at the end of each month, and it is to be regretted that this course had not been kept up throughout the time of feeding. I was informed that one of the pigs, during the time, gained in one month, when only about three months old, 98½ pounds.

Jonathan R. Hughes' and A. G. Ray's were by W. G. Hughes' Irish grazier and Berkshire boar, out of a sow of the common wood's stock. Milton Young's was by Grant Blackwell's Irish grazier and Berkshire boar, out of a sow of the common wood's stock; all the others were of the common wood's stock.

Thomas J. Robb's, (prize) weighed when put up, 19th February, 1842, 32 lbs.; weighed when slaughtered, 9th January, 1843, 499 lbs.; age when slaughtered, 1 year and 17 days; nett gain in 320 days, 467 lbs.

Jonathan R. Hughes' weighed when put up, 19th February, 1842, 19 lbs.; weighed when slaughtered, 9th January, 1843, 433½ lbs.; age when slaughtered, 1 year and 23 days; nett gain in 320 days, 414½ lbs.

Milton Young's weighed when put up, 19th February, 1842, 17 lbs.; weighed when slaughtered, 9th January, 1843, 432½ lbs.; age when slaughtered, 1 year and 1 day; nett gain in 320 days, 415½ lbs.

William McKinny's weighed when put up, 19th February, 1842, 24½ lbs.; weighed when slaughtered, 9th January, 1843, 423½ lbs.; age

when slaughtered, 1 year and 10 days; nett gain in 329 days, 400½ lbs.

Andrew W. Waller's weighed when put up, 19th February, 1842, 18 lbs.; weighed when slaughtered, 9th January, 1843, 423 lbs.; age when slaughtered, 1 year and 5 days; nett gain in 320 days, 405½ lbs.

A. G. Ray's, open sow, weighed when put up, 19th February, 1842, 23 lbs.; weighed when slaughtered, 9th January, 1843, 419 lbs.; age when slaughtered, 1 year and 23 days; nett gain in 320 days, 396 lbs.

Nathan H. Waller's weighed when put up, 19th February, 1842, 10 lbs.; weighed when slaughtered, 9th January, 1843, 367 lbs.; age when slaughtered, 11 months; nett gain in 320 days, 357½ lbs.

Yours, respectfully,

Willis G. Hughes.

P. S. The other five pigs put up died before the time of slaughtering.

THE PRODUCT OF CORN.

It must be evident to every intelligent corn grower, that the average product of corn is greatly below what it ought to be; and from the numerous large crops grown in various parts of our country, it must be equally so, and that nothing but proper manuring, preparation of the soil, and culture is wanting to bring about such an improvement as will give an average yield greatly above the present one. In several instances, nearly two hundred bushels have been grown on an acre, and in numerous others, largely above a hundred have been gathered from the same quantity of land, and these yields have been secured without any extraordinary expenditure of either manure or labor. The frequency of such results, should satisfy all reasonable minds that it is within the competency of good husbandmen to increase the present average product fully a hundred per cent. When we advance this opinion, we do it with a full knowledge and just conception of the responsibility we assume in so doing. We are aware that we may be thought as over sanguine by those who, from their boyhood up, have been in the habit of considering from four to six barrels to the acre as *good crops*, but in dispite of such conclusions, we here affirm it to be our fixed and deliberate opinion, that on good rich ground, well manured, deeply ploughed, thoroughly pulverized and judiciously worked, the crop of corn should yield from 80 to 100 bushels to the acre. Such ground, thus treated, would support a crop of corn four by two, two stalks in the hill; and such being the fact, we can see no just reason why every hill, planted in a prolific bearing corn, should not yield 1½ pint of corn: this would give 127 bushels. But suppose now, that each hill should give a pint, then the product would be 85 bushels. Such crops, some may say, are confined to small lots of a few acres in extent—not so; Mr. Earl Stimson has, for more than ten years in succession, averaged above a hundred bushels to the acre in crops of 5000 bushels. He to be sure plants closer than this, viz: 37 inches each way; but then his corn is of small variety, and will bear that distance in the climate of New York. If it be alleged, that corn planted four by two would subject the crop to firing, we reply, not without the culturist should commit the folly of cutting up the roots by deep ploughing, after the plants had attained sufficient size for the lateral roots to extend across the rows.—*American Farmer.*

CULTURE OF COTTON.

There are many around us who think the surface culture of cotton, or of crops, a new fangled notion, and scout at the idea. All encroachments on established usages and customs are received in this very way. There are others who think it has done and will do for the north, but will not in the south. I will state one circumstance, and close by citing one fact. In 1833, I think, I planted in the same field, about twenty acres of cotton, as usual barred off and scraped. The subsequent culture was entirely with the hoe and sweep, the latter merely shaved the surface, probably to the depth of one half to one inch; also three acres, and cultivated as was customary; plowing three times and hoeing.—There was but a path of eighteen to twenty-four inches dividing. Land as near similar as could be, only the first had been cleared five years, and the second piece only two years; therefore, the latter should have resisted the drought best. Mr. William Montgomery, my neighbor, a practical farmer of some thirty years' standing, ridiculed my notion, as I had been but recently from school. I took him into the field to look at it.—He admitted that the unplowed land was the best crop, and had sustained itself the best through the season, but could not account for it. Now every gardner knows the fact, that his garden returns him a greater income than any other spot he can cultivate. The plow never enters, nor is the earth disturbed two inches from March till July. He cultivates the surface entire, having previously spaded deep and manured well.—Then, if this be so in relation to raising vegetables of the tap root and horizontal root families in the garden, may it not be well to try it elsewhere, especially as more land can be cultivated and kept cleaner?—*Western Farmer.*

IRISH POTATOES.

Plant for late using the last of April, cover slightly and in a very deep furrow, about 18 inches apart, when just above ground cover them with the mould of one side the furrow, which will kill all grass and weeds, then when about 4 inches high, plough with a bull tongue plough four inches wide, twice in each furrow; plant from 12 to 16 inches in the drill; all that will be wanted afterwards, is to pull up any large weeds that grow in them, the shade of the stems and leaves will keep all grass under. To plant an acre in this manner, will take forty bushels of seed, and will produce from two to five hundred bushels to the acre on good land and well manured. The furrow when planted ought to be always the lowest, so the furrow may retain moisture.—*Tennessee Agriculturist.*

IRISH POTATOES.

This valuable vegetable, now much in use, is liable to deteriorate, as are many other productions of our soil. It is also capable of considerable improvement, in size and quality. The same seed, planted a few years in succession, will deteriorate. The signs of this deterioration are—1st. A quantity of blossoms appear on the stalks. 2d. The tuber is hard, watery and ill flavored. To remedy this, first let the cultivator gather the apples or pods from the top of the stalk—preserve the seed until the spring—plant or sow it in drills, in good or well manured ground—he will have potatoes of almost every hue, from the size of a pea to that of a partridge egg, the first year. These, if cultivated with care, will increase in size and be delightful in quality. I have tried the experiment.

I have tried another experiment, which is a shorter method, and perhaps equally efficacious. I took of that species called the "London Lady"—cut off what is called the seed end, threw that away, and planted the balance whole or cut in two—broke up my ground deep early in winter—opened furrows deep, 3 feet apart, dropped the potatoes from 9 to 12 inches apart—coevred first with manure, and threw up a ridge with a barshear plough. The culture was easy—to keep down grass or weeds was all that was necessary—and larger, more mealy, or better flavored potatoes were scarcely found in market than those I raised. The experiment is worth a trial.

I tried the Mashamock potatoe for two years—they disappointed my expectations. The second year they abounded in blooms, but the tubers were inferior. Among the "London Lady," whose seed ends I had cut off, scarcely a bloom appeared—they were fewer in quantity, but superior in size and quality.

I am decidedly opposed to "purchasing seed from the North"—1st. Because it is taking money out of our own country—and 2dly, Because seed from the North will deteriorate as soon as our own, and be no better. These conclusions are the result of actual experiment. And being now in a situation free from any interest in the culture of Irish Potatoes—only so far as eating is concerned—my testimony may be confided in.

L. Garrett.

Ib.

Potatoes.—M. Bellamy Aubert, of France, states, as the result of experiments continued during three seasons, that abundant crops of potatoes may be grown in poor claycy soils, by simply strewing the sets plentifully with rye-chaff previous to covering them with earth at planting.

Professor Voelker, of Erfwet, covers his potatoe sets with a layer of tanner's spent bark, two or three inches thick, before turning a furrow over them. He says he thus provides a loose spungy bed for the young tubers, prevents weeds from springing up and growing in immediate contact with the plants, and secures an abundant supply of moisture during the season, if but one soaking rain occur after planting—as the spent bark, covered by the surface soil, will retain water during the most protracted drought.

Mode of increasing the Growth of Potatoes.—The flowers being cut off as they appeared on the plants, the number of potatoes produced was much greater than where the blossoms had remained untouched. Early in October, the stems and leaves of the plant which had not bore flowers were strong and green; the others yellow and in a state of decay. The plants which had been stripped of flowers produced (on the same space of ground) about four times the weight of large potatoes, very few small ones being found. Those on which the flowers and fruit were left, produced but a small number of middle sized potatoes with a great number of little ones, from the size of a common filbert to that of a walnut.

[*Farmers Gazette.*

SMUT IN WHEAT.

One word respecting smut in wheat. When I was first acquainted with this country, being a boy, the wheat raised here was all smutty, so much so that it required to be washed before it was fit to use. The first year we sowed the wheat procured in the neighborhood, which was smutty. The next season some for seed was procured from a distance, clean of smut; this wheat was washed clean, and while wet, as much good ashes was mixed with it as would stick to the wheat, and sown immediately. The crop was clean of smut, and for more than twelve years in succession we practised the same way on the farm. We procured wheat clean of smut, washed and ashed the seed, and during the whole time never raised a crop of smutty wheat. I have more than once sown beside my neighbor's lot, nothing but a fence dividing us—he sowed his wheat dry and I as I have stated—his was very smutty, mine quite clean. All this time winter wheat was sown and occasionally spring wheat; and to this time, which is more than sixty years, I never have raised a crop of smutty wheat, when I observed the above rule; or procured wheat clean of smut, ashed, &c.—Once I had some spring wheat somewhat smutty; and it was from smutty seed. For a number of years of the time I speak of, there was no lime in the country, otherwise lime would have been used instead of ashes, as we have done since lime has become plenty.

A Claremont Farmer.

American Farmer.

Cholic in Horses.—I was told lately by a gentleman of Prince George county, that a tea-cup full of spirits of turpentine would give instant relief to horses laboring under this disorder. He added, that on one occasion, all the *oxen* of two of his carts were *hoven*—that is, as you know, suddenly swollen by the generation of gas in the stomach, from eating green food. The overseer expected all would die, when our informant ordered a tea-cup full of spirits of turpentine, diffused in oil, to be given to each. The relief was in every case *instantaneous* and effec-

tual, almost before he could have thought there was time to swallow. Such facts should always be communicated for wide diffusion and preservation, in agricultural journals.—*Am. Farmer.*

HINTS TO FARMERS.

A farmer should never undertake to cultivate more land than he can do thoroughly; half tilled land is growing poorer; well tilled land is constantly improving.

A farmer should never keep more cattle, horses, sheep or hogs, than he can keep in good order; an animal in high order the first of December, is already half wintered.

A farmer should never depend on his neighbor for what he can, by care and good management, produce on his own farm; he should never beg fruit while he can plant trees, or borrow tools when he can make or buy them—a high authority has said the borrower is servant to the lender.

A farmer should never be so immersed in political matters as to forget to sow his wheat, dig his potatoes and bank them up in his cellar, nor should he be so inattentive to them as to be ignorant of those great questions of national and State policy which will always agitate, more or less, a free people.

No farmer should allow the reproach of neglected education to lie against himself or family; if "knowledge is power," the commencement should be early and deeply laid in the minds of his children.

A farmer should never use intoxicating liquors as a drink; if, while undergoing severe fatigue and the hard labor of the summer, he would enjoy robust health, let him be temperate in all things.

A farmer should never refuse a fair price for anything he wants to sell; we have known a man who had several hundred bushels of wheat to dispose of, refuse eight shillings and six pence, and after keeping his wheat six months, was glad to get six shillings for it.—*Far. Cabinet.*

TRANSLATIONS FROM THE GERMAN.

Grape Vine Cuttings.—The superintendent of the gardens of the Duke of Weimar, employs with success, the following method of propagating the more choice varieties of wine and table grapes, by means of cuttings. He selects from among the stalks and branches cut away in fall and spring, such as are of suitable diameter—say from ⅜ to ½ inch—and have well ripened wood. These he cuts in pieces in midway between the buds, and splits each piece lengthwise, preserving the bud uninjured. The halves containing the buds are then placed with the flat side on a bed of well prepared garden mould, gently pressed down level with the surface, and covered with moss, or a layer of fine leaf mould. Thus planted, the cuttings speedily strike root, if the bed be kept moist by occasional waterings, and properly shaded, without obstructing the circulation of the air.

Cuttings similarly prepared, though not split, readily strike root and produce vigorous plants, if their ends be dipped in melted sealing-wax, and they be planted in good garden soil, covering them in to the depth of half an inch. The ground must be kept moist, and free from weeds.

Grafting.—M. Schroer recommends using a branch of common willow, an inch or two in diameter, in the following manner, as a matrix for receiving the grafts of such variety if apple, pear or quince trees, as it is desirable to multiply. Make longitudinal cuts or slits *through* the branch, at equal distances of 15 or 18 inches.—Take grafts having two perfect buds, give the lower end the usual wedge shape, using a keen knife, and insert them in the slits of the willow, making the lower bud sit close to the slit. Then bury the branch in a trench formed in good garden soil of such depth as will permit the upper buds to protrude just above the surface of the ground, when the trench is again filled. The ground must be watered occasionally if the season be dry, and weeds must be carefully extirpated whenever they appear. In the spring of the following year, the branch may be taken up and cut in pieces, leaving a small portion to each of the growing grafts—which are to be replanted in a nursery. The willow does not form a permanent union with the grafts, but merely supplies nutriment till the proper fibrous roots are produced from the lower bud.

Horse Shoes.—Many of the readers of the Cultivator are aware that some two or three years since, a patent was taken out by Mr. Burden, of Troy, for machinery intended to manufacture horse shoes. Circumstances prevented Mr. Burden from perfecting his plans at the time, and it has not been until lately, that he has found leisure to return to the subject. He has done it, however, and the result is that with his machinery he is able to produce a more perfect shoe than can be made in any other way, with a rapidity which may well astonish those accustomed only to the former slow and laborious methods. The regulating the size of the shoe, punching the nail holes, turning the heel corks, forming and welding on the steel toe corks, are all performed by machinery, and with a perfection and accuracy the eye and hand are unable to attain. Five different sized shoes are turned out by machinery, thus securing a proper fit to feet of different sized horses, without heating or other trouble. Mr. Burden uses none but the very best Swedes iron, of consequence the quality of his shoes will be first rate.

There are probably very few who have properly considered the importance of the horse shoe manufacture to the country, or the quantity of iron consumed in that product. The census gave the number of horses at about four millions three hundred thousand. For the whole, it will not be too much to allow two sets of shoes annually, which at the ordinary weight of horse shoes, would use at least twenty-five thousand tons of iron and steel. It is very probable the shoes of Mr. Burden will soon be found occupying the market extensively, if not exclusively, and the estimate has been made that by their adoption, the cost of shoeing horses can be reduced one half. Any saving of this kind will be extensively and beneficially felt, and by none more so than by the farmer.—*Cultivator.*

Press for Working over Butter.—Smooth as perfectly as possible a piece of hard wood plank, 18 inches wide and 24 long. On both sides and end, nail pieces of board, rising one inch above the surface. Near the open end screw in a small ring-bolt, or what is better, three; one at each corner and one in the centre. Let the ring on the bolt be one inch in diameter. Make a brake 35 inches long, 9 inches of which is for the handle. Let it be 3½ inches wide, 1½ thick; one edge made sharp, and the other rounded. On the end to go next the eye-bolts put a ring, and in the centre screw a bolt with a head, which will just slip through the eye of either of the ring-bolts. The bolts should be screwed into the plank, so that when the brake is attached, its edges will exactly fit to the surface the whole length.

Need I say more? The rest is plain. Give the end next you a slight elevation; and by using the brake as a braker does his, and by changing as occasion requires, all the milk may be worked from butter with a trifling labor.

A marble slab would be preferable, as the butter would stick less to the surface. A small wooden shovel three inches square, with the edges perfectly straight, should be at hand to keep all in place. James Bates.

[*Cultivator.*

Destruction of Moles.—The following recipes for destroying moles, we extract from an English work by Charles Fothergill, of Salisbury, England.

1. Make a paste with powdered hellebore roots, wheat flour, and ground glass; place it near their holes to eat, and you will soon destroy them.

2. Make a mixture of brimstone, rosin and turpentine, put them into a horn with a narrow neck, first enveloping the same in tar; set fire to the tow thus prepared; then insert the mouth of the horn into the burrow of the mole, and he will soon be suffocated to death.

AUGUSTA MARKET.

[Reports of our Market.—In commencing this department of the "Cultivator," we deem it proper to remark, that in order to render it most valuable to the readers, our information will be always obtained from the most authentic sources, and as we are not interested in any department of trade, or in any bank, our reports of the market and the value of money may be relied on implicitly.]

Wednesday A. M., March 15.

Cotton—The market for the last week has been remarkably quiet, and both holders and dealers seem disposed to await the arrival of later accounts from Europe, which have been daily expected for the last week, before they operate to any considerable extent. The prices, which are almost nominal, range from 5¾ to 6¼ cents as extremes of the market—principal sales 4½ to 5¾ cents.

Trade, &c.—The inactivity in the cotton market has materially influenced the operations in trade in every other department. The stocks of our merchants are, however, very good, and what with the additions now daily making, will soon be very complete, at prices unprecedentedly low.

Exchange and Money—Exchange is at par on all points North and East of us. Central money ranges at 25 to 30 per cent discount. Exchange Bank of Brunswick, the Phœnix and Commercial Banks of Columbus, and the Hawkinsville Bank, are in very bad odor, and generally regarded by our most astute business men as unworthy of credit.

CONTENTS OF THIS NUMBER.

	PAGE.
Marling in South Carolina	9
Bommer's Method of Making Manure; to Destroy Ants; Salt for Hogs	10
Value of Plaster; Deep and Shallow Ploughing	11
How to make a large Cotton Crop	12
Cure for Foundered Horses; Lime for Fruit Trees; Lime and Marsh Mud; Pruning; Durable Rails	13
Editorials; Improving Soils; Union County Prize Association	14
Product of Corn; Culture of Cotton; Irish Potatoes, choice of Seed, Culture, &c.	15
Hints to Farmers; Grape Vine Cuttings; Graftings; Horse Shoes, Burden's Patent; Butter Press; Destruction of Moles; Augusta Market	16

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REMARKS ON THE MANUFACTURE OF CORN-STALK SUGAR.

BY WILLIAM WEBB, OF WILMINGTON, DELAWARE.

The most profitable application of labor is a desideratum too frequently overlooked or disregarded by those who attempt the introduction of new manufactures into a country. All calculations of advantage which is to result from the production of any article must be made with due regard to this point, or practice will prove them to be erroneous.

Fully impressed with this truth, the most rigid examination is invited into every thing now offered; so that, as far as possible, we may arrive at a correct decision respecting the real value of the proposed manufacture. In common with many others, I have felt considerable interest in the plan for extending the cultivation of sugar in temperate climates, and have made many experiments, first upon the beet, and recently upon maize or Indian corn, in the hope of discovering some mode by which the desired end might be attained.

The results from the latter plant have been extremely encouraging. The manufacture of sugar from it, compared with that from beet, offers many advantages. It is more simple, and less liable to failure. The machinery is less expensive, and the amount of fuel required is less by one-half. The quantity of sugar produced on a given space of ground is greater, besides being of better quality. An examination into the nature and productive powers of these two plants will show that no other results could have been reasonably expected. It is a well-established fact, that every variety of production found in plants is derived from the sap. It is also ascertained that the principal substance found in the sap or juice of many vegetables is sugar. Therefore, the amount of saccharine matter produced by any plant of this description may be estimated from an analysis of the fruit, seed, &c., of such plant when ripe. The grain yielded by corn, and the seed from beet, in the second summer of its growth, are nothing more than this sap or juice elaborated by the process of vegetation, and presented to our view in another form.

Now, as it is contrary to the economy of nature to suppose that there should be any loss of nutritive matter in this change of sap into seed or grain, does it not follow that there must be the same difference in the quantity of sugar produced by the two plants as there is between the nutritive properties of beet seed and corn?

The juice of maize contains sugar, acid and a gummy mucilaginous matter, which forms the scum. From the experiments of Gay Lussac, Thenard, Kirchoff and others, [it is proved,] that starch, sugar and gum, are extremely similar in composition, and may be as readily converted into each other, by chemical process, as they are by the operation of nature. For example: starch boiled in diluted sulphuric acid, for thirty-six hours, is converted into sugar of greater weight than the starch made use of.

This result goes to show that every pound of starch found in the seed of a plant has required for its production at least one pound of sugar, in the form of sap. If it be objected that this deduction is too theoretical to be admitted, it may be answered that experiment, so far as it has gone, has fully attested its correctness.

The raw juice of maize, when cultivated for sugar, marks 10° on the saccharometer; while the average of cane juice (as I am informed) is not higher than 8°, and beet juice not over 3°.

From 9¾ quarts (dry measure) of the former. I have obtained 4 pounds 6 ounces of syrup, concentrated to the point suitable for crystallization. The proportion of crystallizable sugar appears to be larger than is obtained from cane juice in Louisiana. This is accounted for by the fact, that our climate ripens corn perfectly, while it but rarely if ever happens that cane is fully matured. In some cases the syrup has crystalized so completely, that less than one-sixth part of molasses remained. This, however, only happened after it had stood from one to two months. There is reason to believe, that if the plant were fully ripe, and the process of manufacture perfectly performed, the syrup might be entirely crystalized without forming any molasses.

This perfection in the manufacture cannot, however, be attained with the ordinary apparatus. Without any other means for pressing out the juice than a small hand-mill, it is impossible to say how great a quantity of sugar may be produced on an acre.

The experiments have been directed more to ascertain the saccharine quality of corn-stalk than the amount a given quantity of ground will produce; but the calculations made from trials on a small scale leave no room to doubt that the quantity of sugar will be from 800 to 1600 lbs. This amount will not appear unreasonable, when it is considered that the juice of corn is as rich as that of cane, and the weight of green produce at least equal.

Mr. Ellsworth, in one of his publications, states, as the result of actual weighing and measuring, that corn, sown broadcast, yielded five pounds of green stalks per square foot; this is at the rate of 108½ tons to the acre.

My attention was first directed to maize as a material for sugar, by observing that, in some stalks, the juice was extremely sweet, while in others it was weak and watery. On examination, it appeared that the latter had borne large and perfect ears and grain, while, on the former, these were either small in size or entirely wanting. The natural conclusion from this observation was, that if the ears were taken off in their embryo state, the whole quantity of saccharine matter produced by the process of vegetation would be preserved in the stalk, from which it might be extracted when the plant was matured. But the idea occurred too late in the season to test it by experiment. A few stalks, however, were found, which, from some cause, had borne no grain; these were bruised with a mallet, and the juice extracted by a lever press. Some lime was then added, and the desiccation, evaporation, &c., began and finished in a single vessel. By these simple means, sugar of a fair quality was produced, which was sent to the horticultural exhibition of our society in 1840.

I have since been informed, through Mr. Ellsworth, that Mr. Hallas, of France, had discovered, in 1839, that the saccharine properties of maize were increased by merely taking off the ear in its embryo state. An experiment, however, which I instituted, to determine the value of this plan, resulted in disappointment; the quantity of sugar produced was not large enough to render it an object. The reasons of this failure will be sufficiently obvious on stating the circumstances. It was found that taking the ear off a large stalk, such as is produced by the common mode of cultivation, inflicted a considerable wound upon the plant, which injured its health, and of course lessened its productive power. It was also found that the natural disposition to form grain was so strong, that several successive ears were thrown out, by which labor was increased, and the injuries of the plant multiplied. Lastly, it appeared that the juice yielded from those plants contained a considerable portion of foreign substance, not favorable to the object in view. Yet, under all these disadvantages, from one hundred to two hundred pounds of sugar per acre may be obtained.

The manifest objections detailed above suggested another mode of cultivation, to be employed in combination with the one first proposed; it consists simply in raising a greater number of plants on the same space of ground. By this plan, all the unfavorable results above mentioned were obviated, a much larger quantity of sugar was produced, and of better quality. The juice produced by this mode of cultivation is remarkably pure and agreeable to the taste.—Samples of the sugar yielded by it are now in the Patent Office, with a small hand-mill by which the stalks were crushed. Some of the same kind was exhibited to our agricultural society in October, 1841, accompanied by an answer to an invitation from its president, Dr. J. W. Thompson, to explain the mode of culture and process of manufacturing the sugar. The molasses, after standing as before mentioned, from one to two months, became filled with small crystals, which, on being drained, exhibited a peculiar kind of sugar; the grain is small, and somewhat inferior in appearance, but still is as sweet and agreeable to the taste as can be desired. A small sample of this sugar I have brought for your inspection. This product, from what was thought to be molasses, is a new and unexpected discovery, and discloses an important fact in the investigation of this subject. It shows the superior degree of perfection attained by the corn plant, compared with the cane, in any part of the Union. It is generally understood that the latter cannot be fully matured in any except a tropical climate, and the proportion of molasses obtained from any plant is greater or less according to the immaturity or perfection of its growth. The sweetness of the corn-stalk is a matter of universal observation. Our forefathers, in the revolutionary struggle, resorted to it as a means to furnish a substitute for West India sugar. They expressed the juice, and exerted their ingenuity in efforts to bring it to a crystalized state, but we have no account of any successful operation of the kind. In fact, the bitter and nauseous properties contained in the joints of large stalks render the whole amount of juice from them fit only to produce an inferior kind of molasses. I found, on experiment, that by cutting out the joints, and crushing the remaining part of the stalk, sugar might be made, but still of an inferior quality. The molasses, of which there was a large proportion, was bitter and disagreeable.

From one to two feet of the lower part of these stalks was full of juice, but the balance, as it approached the top, became dryer, and afforded but little. From the foregoing experiments we see that, in order to obtain the purest juice, and in the greatest quantity, we must adopt a mode of cultivation which will prevent

the large and luxuriant growth of the stalk.—As we are upon the threshold of this inquiry, many other improvements may be expected in the mode of operation; for example, it may be that cutting off the tassel as soon as it appears on the plant will prevent the formation of grain, and prove a preferable means for effecting that object.

On the whole, there appears ample encouragement for perseverance. Every step in the investigation has increased the probabilities of success; no evidence having been discovered why it should not succeed as well, if not better, on a large scale, than it has done on a small one.

1. In the first place, it has been satisfactorily proved, that sugar of an excellent quality, suitable for common use without refining, may be made from the stalks of maize.

2. That the juice of this plant, when cultivated in a certain manner, contains saccharine matter remarkably free from foreign substances.

3. The quantity of this juice (even supposing we had no other evidence about it) is sufficiently demonstrated by the great amount of nutritive grain which it produces in the natural course of vegetation. It is needless to expatiate on the vast advantages which would result from the introduction of this manufacture into our country.

Grain is produced in the west in such overflowing abundance that the markets become glutted, and inducements are offered to employ the surplus produce in distillation. This business is now becoming disreputable. The happy conviction is spreading rapidly, that the use of alcohol as a beverage, instead of conducing to health and strength, is the surest means of destroying both. Some other production, therefore, will be required, in which the powers of our soil may be profitably employed. This, it is hoped, will be found in the business now proposed. Instead of distilleries, converting food into poison, we may have sugar-houses, manufacturing at our doors an article in universal demand, not merely useful, but necessary, furnishing as it does one of the most simple, natural and nutritious varieties of human sustenance found in the whole range of vegetable production.

It is said that the general use of sugar in Europe has had the effect to extinguish the scurvy and many other diseases formerly epidemical. It may be doubted whether a tropical country can ever furnish a great amount of exports, except through the means of compulsory labor.—It appears, then, highly probable, that if the inhabitants of temperate countries wish to continue the use of sugar, they must find some means to produce it themselves. The beet appears to succeed well in Europe, and the manufacture from it is extending rapidly; but there is no hazard in making the assertion that Indian corn is far better adapted to our purpose. The following mode of cultivating the plant, and making the sugar, is the best that can now be offered. The kind of soil best adapted to corn is so well understood, that no directions on this point are necessary, except that it should be rich—the richer the better; if not naturally fertile, manure must be applied, either ploughed in or spread upon the surface, or used both ways, according to the ability of the owner. Nothing can form a better preparation for the crop than a clover sod well turned under and harrowed fine immediately before planting.

Select for seed the largest and best ears of any variety of corn not disposed to throw up suckers or spread out in branches; that kind most productive in the neighborhood will be generally the one best adapted to the purpose. The planting should be done with a drilling machine. One man, with a pair of horses and an instrument of this kind, will plant and cover, in the most perfect manner, from ten to twelve acres in a day. The rows (if practicable, let them run north and south) two and a half feet apart, and the seed dropped sufficient thick in the row to ensure a plant every two or three inches. A large harrow, made with teeth arranged so as not to injure the corn, may be used to advantage soon after it is up. The after culture is performed with a cultivator, and here will be perceived one of the great advantages of drilling: the plants all growing in lines, perfectly regular and straight with each other, the horse-hoe stirs the earth and cuts up the weeds close by every one, so that no hand-hoeing will be required in any part of the cultivation. "It is part of the system of cane planting in Louisiana, to raise as full a stand of cane upon the ground as possible, experience having proved that the most sugar is obtained from the land in this way." As far as my experience has gone, the same thing is true of corn. This point must therefore be attended to, and the deficiencies, if any occur, made up by timely replanting.

The next operation is taking off the ears.—Many stalks will not produce any; but whenever they appear, they must be removed. It is not best to undertake this work too early, as when the ears first appear, they are tender, and cannot be taken off without breaking, which increases the trouble. Any time before the formation of grain upon them will be soon enough.

Nothing further is necessary to be done until the crop is ready to cut for grinding. In our latitude, the cutting may commence with the earlier varieties about the middle of August. The later kinds will be ripe in September, and continue in season until cut off by frost. The stalks should be topped and bladed while standing in the field. They are then cut, tied in bundles and taken to the mill. The top and blades, when properly cured, make an excellent fodder, rather better, it is believed, than any hitherto used; and the residuum, after passing the rollers, may easily be dried and used in the same way—another advantage over the cane, which, after the juice is expressed, is usually burned

The mills should be made on the same general principle employed in constructing those intended for grinding cane. An important difference, however, will be found both in the original cost and in the expense of working them. Judging from the comparative hardness of the cane and corn-stalk, it is believed that one-fourth part of the strength necessary in the construction of a cane mill will be amply sufficient for corn, and less than one-fourth part of the power will move it with the same velocity. It may be made with three upright wooden rollers, from twenty to forty inches in length, turned so as to run true, and fitted into a strong framework, consisting of two horizontal pieces, sustained by uprights. These pieces are mortised, to admit wedges on each side the pivots of the two outside rollers, by which their distance from the middle one may be regulated. The power is applied to the middle roller, and the others are moved from it by means of cogs. In grinding, the stalks pass through on the right side of the middle cylinder, and come in contact with a piece of frame work called the dumb returner, which directs them backwards, so that they pass through the rollers again, on the opposite side of the middle one. The modern improved machine is made entirely of iron, three horizontal rollers, arranged in a triangular form, one above and two below; the cane or stalk passes directly through, receiving two pressures before it escapes. The lower cylinders are contained in a small cistern which receives the juice. The latter machine is the most complete; the former the least expensive. These mills may be moved by cattle; but, for large operations, steam or water power is preferable. When the vertical cylinders are turned by cattle, the axis of the middle one has long levers fixed across it, extending from ten to fifteen feet from the centre. To render the arms firm, the axis of this roller is carried up to a considerable height; and oblique braces of wood, by which the oxen or horses draw, are extended from the top of the vertical axis to the extremities of each of the arms. When horizontal cylinders are propelled by animal power, the upper roller is turned by the cogs at one end, which are caught by cogs on a vertical shaft. It is said that, in the West Indies, the purest cane juice will ferment in twenty minutes after it enters the receiver. Corn juice has been kept for one hour before boiling, without any apparent injury resulting; but so much delay is not desirable, as it may be attended with bad effects.

The process which has been employed in the manufacture of maize sugar is as follows: The juice, after coming from the mill, stood for a short time, to deposite some of its coarser impurities. It was then poured off and passed thro' a flannel strainer, in order to get rid of such matters as could be separated in this way. Lime water, called milk of lime, was then added, in the proportion of one or two table spoons full to the gallon. It is said by sugar manufacturers, that knowledge on this point can only be acquired by experience; but I have never failed in making sugar from employing too much or too little of the lime. A certain portion of this substance, however, is undoubtedly necessary, and more or less than this will be injurious; but no precise directions can be given about it. The juice was then placed over the fire, and brought nearly to the boiling point, when it was carefully skimmed—taking care to complete this operation before ebullition commenced. It was then boiled down rapidly, removing the scum as it rose. The juice was examined, from time to time, and if there was any appearance of feculent particles, which would not rise to the surface, it was again passed through a flannel strainer. In judging when the syrup is sufficiently boiled, a portion was taken between the thumb and finger; and if, when moderately cool, a thread half an inch long could be drawn, it was considered to be done, and poured into broad shallow vessels to crystalize. In some cases crystalization commenced in twelve hours; in others, not till after several days; and in no case was this process so far completed as to allow the sugar to be drained in less than three weeks from the time of boiling. The reason why so great a length of time was required I have not yet been able to discover.—There is no doubt but that an improved process of manufacture will cause it to granulate as quickly as any other.

Enough has been said to enable any one so disposed to manufacture sugar from maize.

As to the profits of the business, I shall make no positive assertions; experience on the subject is yet too limited to warrant them; and as all the facts in relation to it are now before the public, every one interested can draw his own conclusions. It is said, by those acquainted with the cultivation of the cane, that that business cannot be carried on profitably on less than one hundred acres in crop; and that attempts on a small scale will be certain to fail, with a great loss of time and labor. How far this may be applicable to corn remains to be seen.

Some comparison between the cultivation of cane and that of corn may perhaps be interesting.

The cane lands in Louisiana are redeemed to agriculture by strong embankments along the river, and by numerous ditches, which extend back into the swamp to a considerable distance beyond the line of cultivation. The ground is still further divided, by smaller ditches, into lots of from one to two acres in extent. It is extremely rich and productive, but the expense of draining and keeping up the embankments must be considerable; this forms the first difference to be noted in the culture of the two plants under consideration.

The best season for planting cane in Louisiana is in the fall, which is also the time of harvest, when labor is the most valuable, and the greatest exertions are required to secure the crop before it is destroyed by frost.

But the most striking difference will be found in the cost of seed, and in the labor of planting. The cane is propagated by layers; these are partly furnished from the tops of the plants, when cut for grinding, but are principally ratoons. Of the latter it requires the produce of one acre to plant three. The grain from one acre of corn

will be sufficient for planting forty acres; therefore the difference in the expense for seed will be as one to thirteen

In planting cane, furrows are made with the plough from two and a half to three feet apart; in these the layers are placed, in a double row, and the earth drawn over them, with hoes, to the depth of three or four inches.

In the spring, before the plants are up, this covering is partly scraped off, so as to leave them buried from one to two inches. From this account it is evident that no more manual labor will be required to drill fifty acres in corn, than to plant one acre in cane. The labor of cultivating the latter plant during its growth is also greater, but this may be balanced by the extra work required to take off the embryo ears from the corn. When cultivated in the mode recommended, the stalk of corn is soft, remarkably heavy, and full of juice from bottom to top.—The amount of power required for grinding them must be much less than is necessary for cane, or, what is the same thing, an equal power will do it with greater rapidity. The average yield of cane, in Louisiana, is one thousand pounds of sugar and forty-five gallons of molasses per acre. From the above comparative statement, it would appear that one-half this amount of crop from corn would be equally if not more profitable.

I will only add, in conclusion, that whether or not the sugar from the corn-stalk may soon become an article of profitable export, its manufacture in the simplest form will enable every family to supply themselves with this article for common use, now become so much a necessary of life, and thus save a considerable bill of expense yearly paid for foreign sugars.

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*Extract from Annales de la Societe Polytechnique, Practique No. 22, for October, 1839.**

Sugar or Corn.—There is no plant of greater interest or utility than Indian corn. It can serve, under a great variety of different forms, for the nourishment of man and the domestic animals, and above all, the application of industrious science.

In reference to its saccharine qualities, maize has not been sufficiently appreciated. Travellers report that under the tropics the stalk of this plant is so very saccharine that the Indians suck it as in other places they do the sugar cane. M. Pallas, who has made a great many researches on this application of maize, has arrived at a remarkable result; he has found by many experiments, both in France and more recently in Africa, that this vegetable, by a simple modification applied to its culture, is able to furnish a much more considerable quantity of sugar than by the ordinary method. This method consists in detaching from the plant, immediately after the fecundation of the ovaries, (after the plant has tasselled,) the young ear, and to leave it to develop itself, thus deprived of its fruit. Arrived at maturity, the stalk of Indian corn contains crystalizable sugar in quantity very often double that obtained when the plant is left to mature with the grain. In fact, by the ordinary mode of culture, the grain is nourished at the expense of the sugar in the stalk, as it absorbs a great quantity of this immediate principle, which, by the process of nutrition, is converted into starch. On the other hand, if the young ears are immediately destroyed, the sugar intended to nourish them remains in them, where it accumulates, and the maize plant is thus converted into a true sugar cane, while the fibrous part can be manufactured into paper.

The quantity of sugar is so very great in the stalk of the maize, deprived of the ear, that the pith of this vegetable retains a sensible flavor of sugar, even after it has been dried, as is easily proved by examining the specimens deposited by M. Pallas in the bureau of the Academy of Sciences. These results are so important as to merit experiments on a grander scale, which may obtain thus for France a source of new industry in the manufacture of sugar.

H. L. Ellsworth.

*Translated at the Patent Office, and highly conformatory of Mr. Webb's essay.

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No. 4.

Dear Sir:—Your favor is duly received. You request to know the best method of crystalizing corn syrup, and I know of no more ready method to afford the information required, than to detail the entire mode which should be pursued for its manufacture:

1st. To cut the cane as ripe as possible, but before any acetic acid is formed: litmus paper, touched to the fresh cut cane, will turn red if acid.

2d. Express the juice without loss of time, as every moment after cutting will deteriorate its quality.

3d. A small quantity of clear lime water (say one quart to a hundred gallons of juice) should be added the moment it is expressed, unless the juice shows acidity with litmus paper; in that case, too, lime should be used, but a solution of sal soda or soda ash, should be added, until it is precisely neutral.

4th. When the juice is neutral (free from excess of acid or alkali) it should be evaporated in such an aparatus as would finish its change in thirty minutes, if the boiling power is too small good crystalization cannot possibly be obtained.

The whole time occupied from the cutting of the cane to finishing its boiling should not exceed one hour.

5th. *To know when the boiling is finished*, place a thermometer in the kettle, and continue to evaporate until it stands at 239° Farenheit.—If, when placed to run off after cooling, it should be found too freely boiled, the next time boil to 240°, or, if too light to run off, to 238°, and so on.

6th. The kettle or boiler should be so arranged that the moment it is done its charge should be thrown into a cooler, capable of holding a number of charges. The first charge should be left in the cooler, without stirring, until the second charge is thrown in; then with an oar scrape the crystals found on the side and bottom of the cooler loose, and gently stir the whole mass together, (the less stirred the better,) so continue, at the letting in of each charge, to stir gently; and when all is in the cooler, let the whole stand until it cools down to 175°; then fill out into sugar moulds of a capacity not less than 14 gallons. When cooled in the mould sufficient, (say fourteen hours,) pull the plug out of the bottom of the mould, and insert a sharp point, nearly as large as the hole, some six inches; withdraw the point, and stand the mould on a pot to drip.

7th. If the sugar is intended to be brown, leaving it standing on the pot for a sufficient length of time, in a temperature of 80°, will run off its molasses, and leave it in a merchantable shape; it will probably require twenty days. It can then be thrown out of the moulds, and will be fit for use. When moulds cannot be obtained, conical vessels of wood or metal with a hole at the apex, will answer equally as well.

The above description will be sufficient for any operator, if strictly followed; but should any of your friends wish to make the experiment on a large scale, or to produce white instead of brown sugar at a single operation, they had better see me personally before commencing, as the kind of kettle, and many other minor particulars, will be important. The above description, however, is fully sufficient for the use of the farmer. If the juice of the cornstalks be manufactured with the rapidity named in the former part of this letter, no clarification will be necessary, and scum which may rise during the boiling can be taken off with a skimmer; but in the *large way*, both clarification and filtration would be requisite, as in large operations every part of the kettle cannot be got at to skim. Since I last saw you, I have made some experiments on the cornstalk; and if your statements are correct as to the quantity of juice which can be obtained from the acre, then there can be no doubt of its entire superiority over the sugar cane. I fear, however, that the enthusiasm of those who made the experiments you spoke of has led them into error. It is true that the juice of the cornstalk, grown with a view to sugar making, will yield a juice at 10° Baume. I have made arrangements to try the experiments fully in the coming summer, and when done will communicate the results. I remain, sir, yours respectfully,

J. J. Mapes.

Hon. H. L. Ellsworth.

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REMEDY FOR COLIC IN HORSES.

Take two quarts of cold water in a hand basin, add with your fire-shovel say a pint of hot wood ashes or embers, and stir. Cut off an inch and a half from a common hand of tobacco, and shred in the mixture—stir all up, and let it stand fifteen minutes and settle. Pour off a common black bottle full of the fluid and drench your horse—in half an hour he will be well.

Rationale.—The gas which bloats the horse is probably carbonic acid gas and light-carburetted hydrogen, the product of the vegetable decomposition which is going on in the intestines—at any rate it is a gas which is immediately absorbed by its combination with an alkali.—The tobacco is a powerful anti-spasmodic and cathartic—it, therefore, prostrates the nervous sensibility, checks the inflammation and increases the action of the lower intestines. In a critical or extreme case, it will be well to give an enema of a strong decoction of tobacco with a common syringe. Out of more than one hundred instances, in which I have seen this remedy used, I have yet to witness the first failure. It also has an advantage over very many remedies, viz: it cannot injure a horse in perfect health. Feed light for a day or two.

Causes of Colic.—The main cause consists in the presence of a greater amount of food than the intestines can elaborate into nutriment, or of a kind of food difficult of digestion, producing spasm, obstruction, vegetable decomposition and consequent inflammation. *Hard driving on a full stomach* will produce colic, because the effort weakens the tone of the digestive powers, and they cannot elaborate the food—which then produces irritation and inflammation. *Cold water when the horse is heated*, because it is a powerful stimulus, and will produce spasm or obstruction, or by the re-action produces weakness of the digestive organs. It also gives too much fluidity to the food—fluids are more difficult of digestion than solids. It also increases the fermentation. *Hearty feeding after hard driving*, because the stomach and intestines sympathize with the general fatigue of the system, and are easily overloaded, and the appetite will induce the horse to eat more than he can digest.

Colic is first flatulent, then inflammatory. In the flatulent stage, or in what is called belly-ache, aromatic remedies or half a gill of spirits of turpentine, or a pint of whiskey and black pepper may be given; all these stimulate the system, and may assist it in overcoming the difficulty. But in the latter and inflammatory stage, which rapidly succeeds the former, these same remedies would produce speedy death by increasing the inflammation. In nine cases out of ten, this disease is not observed by the ordinary driver until it has assumed the inflammatory form—in which stage the remedy at the head of this article should be given with as little delay as possible; although it should not be omitted even if the horse be supposed to be in the article of death itself—for I have seen them recover when every by-stander had dismissed all hope. Yours truly, T. N. Welles.

French Creek, Peoria Co., Nov. 25, 1842.

P. S.—*Change of feed* will sometimes produce colic, for the reason that the digestive organs do not readily adapt themselves to it—and the food lies there in its unchanged state, producing by heat and moisture, fermentation, irritation and inflammation.

Colic produced by oats is not as obstinate as that produced by corn. T. N. W.

Southern Planter.

ADDRESS OF THE HON. W. C. RIVES,

BEFORE THE ALBEMARLE AGRICULTURAL SOCIETY.

Seldom have we examined (says the Tennessee Agriculturist) an agricultural address of more interest than that delivered on the 29th of October, 1842, by the Hon. Mr. Rives of Virginia, and did our limits admit, we should be pleased to lay the whole document before our readers. A few extracts, however, we think, cannot fail benefitting the public, and we will hear him first on

AGRICULTURAL EDUCATION.

"A public endowment, under the patronage of the State, for instruction in the principles and practice of agriculture, is imperatively due to that great class of the community, which is immediately connected with the cultivation of the earth. We have, in great number, schools of law, schools of medicine, schools of general literature, but none of agriculture. Why is this so? The recent census shows that the number of persons engaged in agriculture is four times greater than the whole number of persons employed in commerce, manufactures, the learned professions and trades of every description, all put together. Does not this consideration of policy and justice, then, require the provision of some means of professional education, in an art to which so predominant and vital a portion of the industry and worth of the country is devoted? Is agriculture alone to be degraded into an empirical pursuit, which requires no liberal instruction? On the contrary, there is no other profession, I will venture to affirm, which demands, for its intelligent exercise, so wide a range of scientific knowledge. It embraces within its scope, by a direct and necessary dependence, the domain of chemistry, botany, vegetable physiology, geology, mineralogy, meteorology, zoology, mechanical philosophy, not to speak of the moral and political sciences which have so important a bearing, in many respects, upon some of its highest interests. To which of the *learned* professions, so called, I would ask, is so large a group of kindred sciences associated in such close and intimate relationship?

These considerations are making themselves daily more and more felt, and are arousing public attention, in every enlightened community, to the just claims of agricultural education. A professorship of agriculture has been since established in the universities of Edinburg and Dublin; and from the former has recently proceeded one of the most valuable works on the "elements of practical agriculture," ever published. If distinct professorships of agriculture have not yet been founded in the English universities, arrangements are in progress for establishing them; and in the mean time lectures of distinguished ability have been delivered on the subject by some of their learned professors, —among which it would be inexcusable not to mention particularly the lectures of Professor Daubeny of the University of Oxford. It is time that Virginia should acquit herself of the debt which every enlightened and especially every Republican commonwealth owes to this great primordial interest of society. We must have a professorship of agriculture in our University as a part of the general course of liberal studies, to furnish our young men, when they quit its walls, with a competent knowledge of the principles of a profession which so many of them embrace in after life. In addition to this, there should be established in connection with the University, a *special agricultural institute*, designed for those who might not wish or find it convenient to follow the general course of University studies, but whose object would be to acquire in shorter time or at less expense, the professional education of an instructed agriculturist, as well as the general accomplishments of an intelligent and useful citizen. In this department, theory and practice should go hand in hand; and for that purpose, a model and experimental farm should be attached to the institute to be conducted under the most skilful supervision and management, and to afford examples of the most improved methods of culture and fertilization.

Of such an institution, a perfect examplar, tested by forty years of successful experience, is presented to us in the admirable and celebrated establishment of Von Fellenberg at Hofwyl in Switzerland. I am spared the necessity of details in the developement of this suggestion, by simply referring to that well known establishment as a general model, admitting readily of modifications where a difference of circumstances may be supposed to require them. It was my good fortune during my residence in Europe, to visit this classic spot; and I can safely say, that I saw nothing in the palaces of Kings, in the museums of the fine arts, in the gorgeous displays of wealth and power on every hand, which impressed me with half the admiration I felt in contemplating the modest but noble establishment of the Swiss republican patriot and sage. Agriculture he chose as the basis of his enterprise; and by the happy combination, in the training of his pupils, of intellectual and bodily labor, mutually relieving and giving zest to each other, he has achieved those prodigies of moral and physical improvement, which have drawn upon his institution the earnest attention and applause of the civilized world. It has furnished to Continental Europe the best models of its agriculture, while it has sent forth into its various States and Kingdoms some of their most useful, virtuous and enlightened citizens. At the same time, the model farm of Hofwyl stands a proud refutation of all the stereotype satires, so frequently indulged, on scientific farming, as the accounts of the establishment, kept with minute mercantile exactness, disclose through a series of years, a nett profit of 8½ per cent upon the whole capital employed—a rate of profit with which, I venture to say, any of us *practical* farmers would be more than content.

Mr. R. is not only a friend to a better system of education, but he is likewise a pioneer in the improvement of lands. Hear him on the subject of

LIMING LANDS.

Being somewhat of a pioneer in the lime husbandry in this portion of the State, I feel myself called on, gentlemen, to give you the results of my experience. I have used about 12,000 bushels of it, (slaked measure,) from a quarry opened for the purpose on my own land, which has been spread over about 150 acres, at an average, therefore, of 90 bushels to the acre. Some accounts which I have read of its effects elsewhere, not expressed with the accuracy and discrimination so much to be desired in such communications, had led me to expect a decided effect upon the *growing* crop—by which I mean the crop, of either corn or wheat, immediately succeeding the application of lime. In this I was disappointed; but the discrepancy is probably accounted for by the fact that I have not hitherto used lime in combination with putrescent manures from the farm yard or the stable, while others have most probably done so, though that circumstance was noted in the communications to which I refer. My first disappointment however, in regard to the effects on the growing crop, was more than compensated by the marked, unequivocal and decided effect I have never failed to perceive from the lime *alone* in the *clover* succeeding the wheat crop—with which it has been my general practice to apply the lime at the time of seeding, harrowing in the lime and wheat at one and the same operation. The increased luxuriance of the clover has furnished, of course, conclusive evidence of the improvement of the land from the application of the lime, and has in its turn, enured to the still further amelioration of the soil. All my observations in regard to lime would lead me to the opinion that it is the most *permanent* of all manures, and to concur in the conclusion so forcibly stated by Dr. James Anderson, one of the most copious and able of all the British writers on agriculture, who in his most valuable "Essay on Lime" says "*that its effects on the soil will be felt, perhaps as long as the soil exists;*" and this conclusion he justifies by the mode of its action altering the nature and constitution of the soil itself, and enduing it with capacities and affinities which it never before possessed. My applications of lime have been almost entirely on a close gravelly loam, of a brownish or gray color; and the result of a single experiment on land of a different description would lead me to believe that it is not adapted to the red ferruginous clay soils of the sides and base of our southwest mountains. It is a proverb in England and Scotland that

"He that marls sand
Will soon buy land;
But he who marls clay
Throws all away."

The reason that Dr. Anderson suggests for the the comparative inefficiency of marl on clay soils is, that clay forms a large proportion of marl, and the addition of clay to clay, therefore, cannot be expected to produce so good an effect. The same reason would furnish a solution of the supposed want of adaptation of lime to the red clay soils of the south west mountains *proper*, and of its unquestionable efficiency on the adjacent gray loams, as a chemical analysis of the two soils has, I understand, disclosed the existence already of two per cent of lime in the former, and of hardly any sensible quantity whatever, in the latter.

Nothing can be more certain than the highly beneficial effects of lime as a manure, on a large majority of our soils, in which, according to an analysis, by Mr. Ruffin, of as many as sixteen different specimens taken from various and distant parts of the State, lime is very rarely ever found as an original and natural ingredient.—The important practical question then is, whether the expense of the application is justified by the benefits of the manure. This is a question which every person must determine for himself according to his particular position, and his own views of profit and loss. For myself, I will only say that I have always found the best application I could make of money derived from the land, was to return it back to the land in the shape of improvement. There is no investment of capital that can be more safe, and in ninety-nine out of a hundred cases, none half so profitable. If by laying out five dollars in manure on an acre of land you make it produce you 20 bushels of wheat worth a dollar a bushel, when it produced but five bushels before, and this product is renewed to you every four years in an ordinary rotation of crops, have you not secured an interest of one hundred per cent on the outlay you have made, and at the same time increased the value of your land four hundred per cent! And yet results such as these, extravagant as they may seem, and though we may be unconscious of them ourselves, are often achieved by a liberal and spirited system of improvement. The *passion* of us Virginia farmers is to acquire more land—not to make the land we already possess more productive. If a farmer should add yearly to his possessions a hundred acres of land, he would doubtless consider himself getting along very prosperously in the world. But if at no greater expense he can make a hundred acres of land twice or thrice as productive as they were before, is he not doing much better, with the great advantage of having a more compact surface on which to concentrate his labor and care.

The misfortune of our Virginia agriculture is that we have already too much land for the labor we can bring to cultivate it. As we are not likely to make a voluntary curtailment of the extent of our farms, the greatest practical reform that can be introduced into their management is to curtail the arable surface on each, and to lay down a larger portion of our lands to grass. Instead of wasting the energies of our soil by annually spreading over a wide surface

a superficial, negligent and teazing cultivation, yielding comparatively nothing, how much better would it be to cultivate one half or one third of the spaee we now do, to concentrate upon that all our resources of labor and improvement, and to leave the rest to recruit itself by the healing process of nature. Liebig has explained in a very ingenious and philosophical manner the process by which lands laid down to grass are constantly renewing and improving themselves, and has thus confirmed the deductions of our own observation by the demonstrations of science. Should any one doubt whether we should derive from the reduced surface, better cultivated, a product equal to that of the whole under adequate culture, let him recollect the instructive story told by old Columelia, in his De re rustica, of a Roman vine-dresser, who had a vine-yard and two daughters; when his eldest daughter was married, he gave her a third of the vineyard for a portion, and yet he had the same quantity of fruit as before; when his second daughter was married, he gave her the half of what remained, and still the produce of his vineyard was undiminished.

RUST IN WHEAT.

The following extracts from a correspondence between Mr. Pleasants, editor of the Farmers' Register, and Mr. Peyton, on this important subject, are highly interesting and deserve the most profound consideration of planters.

The following letter is published at the instance of the gentleman to whom it was addressed, the more willingly in consideration of his reply, and because the correspondence may lead to some further discussion of the important subject to which it relates. The rust is, beyond doubt, by far the most formidable drawback upon the wheat crop with which the farmer has to contend. At the moment when his hopes are highest, it spreads as a cloud over his fields, and disappoints him of the reward of his labors.—We would request our correspondents to examine into the causes of this disease, and if they know of any remedy or preventative, to communicate it for the general good. If our own views are correct, we should expect that the use of marl has had a happy effect in guarding against its ravages. Will some of our readers inform us on this point.—*Farmers' Register.*

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Chesterfield County, Nov. 23, 1842.

William M. Peyton—Respected Friend—* * * By the way, while I have the pen in hand, is not Roanoke a limestone country? I should suppose your soils were destitute of calcareous matter, from the fact that you are equally subject to the rust in wheat as we are in lower Virginia. I infer at least that such is the fact, from thy letters in the Southern Planter.—As far as my observation extends, lime is an effectual preventive of the rust. Putrescent manures and clover lays, on the contrary, almost always induce it if the season be at all unfavorable at the critical period of ripening. The reason I take to be this: putrescent matter, by furnishing more food than the plant can elaborate, produces a state of plethora, which results in the extravasation of the sap at the season of greatest vigor. This indeed I understand to be thy theory. The tendency of lime is to check this redundancy of growth, by providing in some way the specific food of the plant. Whether this be done by enabling it to decompose carbonic acid with greater activity, or by furnishing it with silicate of lime, or by contributing to the developement and formation of the grain, rather than to an exuberant vegetation, cannot perhaps be determined. When I was in the great wheat growing district of western New York, some years ago, I saw fields of wheat that I was told would yield 25 or 30 bushels to the acre, which I could not have supposed, from any previous observation, would have produced more than ten. The soils of that region being of a diluvial formation, are so rich in calcareous matter, from the former attrition of the lime-rocks scattered over the country, that they frequently effervesce with acids. The stem had so little blade that it appeared almost naked. Plaster of Paris, which has been recommended as a protection against the rust, though it be lime in another form, does not contribute much to the formation of grain. Its tendency is eminently to increase the bulk of vegetable growth, and therefore, when it acts on wheat, to induce rust and mildew. To guard against the rust then, such application to the soil appears necessary as would afford specific nourishment to the seed. In every analysis of wheat there is found a portion of lime. There are also some manures that furnish the specific ingredients, but those only I believe which are concentrated in their energy. I have read nothing lately which sheds more light on the distinction I have attempted to draw, between manuring for the grain and manuring for the straw, than the detail of some experiments with guano by J. E. Teschemacher, of Boston, and contained in his address to the Horticultural Society. Some plants treated with guano, the balsam for instance, produced very inferior flowers; but not a flower missed bearing its seed vessel, and every seed vessel was filled with perfect seed; while other plants of the same species, and growing under the same circumstances, with the exception of the guano, had only a portion of the seeds perfect in each pod, though the flowers were very fine.

There is a neighborhood in Maryland which I occasionally visit, the inhabitants whereof form a little community of intelligent and industrious farmers, who mostly belong to the same society of which I am a member, namely, that of the Friends or Quakers. They do their own work; and when one works with his own hands, he is more likely to make both ends meet. They find it to their interest to haul lime from six to ten miles to apply to a soil by no means naturally fertile. The crops of wheat on their limed lands are invariably good, and but little affected by rust.

A few years ago, a friend of mine, in an adjoining county, planted an acre or two of ground in pumpkins. The vines were so much infested with bugs that he sprinkled caustic lime over the leaves for the purpose of destroying them.—In the fall the lot was seeded to wheat, and at the ensuing harvest the locality of every hill was conspicuously visible. In each spot where the lime had been applied, the straw was bright and of a golden color, without the least appearance of rust; while in every other part the wheat was completely ruined. If it is not too late in the season, I would suggest the trial of a small piece of ground with lime or ashes, if it was no more than a few yards square. Ashes would be as beneficial as lime, for they afford potash.

With great respect,

T. S. Pleasants.

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Big Lick, Roanoke, Nov. 27, 1842.

* * * I turn now to the main body of your letter, which contains suggestions of the utmost interest, and which, if correct, solves a long disputed problem, while it opens the prospect of incalculable benefits to the farmer. As there is nothing connected with the wheat crop which effects its successful culture so seriously as its liability to rust, I have felt disposed to throw into the common stock my mite of observation and experience, in the hope that others would pursue the same course, and that in the end some useful result might be attained by a comparison of the different views. My own notions, as developed in the different publications alluded to by you, have been that it results from a plethora, induced by excessive vegetation. That whilst some modes of cultivation, and especially the habit of applying the strong, stimulating manures of the stable and farm pen, would augment the tendency to rust, and other modes would partially ward it off, no skill could avert it entirely in some seasons. In my essay of July, in the Southern Planter, I say that rust never appears until the wheat has attained its full growth, and when there is nothing left for the leaves and stem to perform but the elaboration of the juices for perfecting the seed. When plants have reached this point, every physiologist knows that they require no further extraneous aid in the formation of the seed. The ovary has performed its office, fructification has taken place; and the gradual concentration of the juices of the leaves, stem and roots in the seed, producing the death of the former, is all that is required. Before attaining this state, excessive vegetation only produces excessive growth; but when the plant is fully developed, and nothing more required for the maturation of the seed but a slow, gradual and regular supply of duly elaborated sap, if there should then happen a warm, damp spell of weather, a succession of sunshine and showes, an inordinate flow of sap is at once produced, which destroys the consistency which is then so necessary to the grain, and you distend the vessels to such a degree, that they burst of their repletion, and exude upon the surface.—Should this occur when the wheat is in the milk state, it is destructive of the grain, which perishes for the want of proper nourishment.

In these and other views of the same essay, the very sensible editor of the American Farmer concers, so far as the nature and causes of rust are concerned but dissents *qualifiedly* from the conclusion to which "my premises and reasoning would lead." In this you and he seem to agree, though you reach the same point by contrary roads.

The editor of the Farmer, after wisely substituting bland vegetable manures for the strong putrescent manures of the barn-yard, suggests the application of gypsum, as an auxiliary agent in preventicg the too rapid decay of the vegetable matter. He is led to this suggestion by the present received explanation of the action of this mineral. Liebig says, as quoted by him, "that the action of gypsum really consists in its giving a *fixed* condition to the *nitrogen* or *ammonia*, (food of plants) which is brought into the soil, and which is indispensable for the nutrition of plants." He adds further, that the decomposition of gypsum by carbonate of ammonia does not take place instantaneously; on the contrary, it proceeds very gradually, and this explains why the action of gypsum lasts for several years. From these quotations, the editor thinks it fairly inferable that the plaster would act as a retarding principle, and thus enable them to regulate the supply of nutriment to the crop.—My letter, which was *partially* published in the November number of the Southern Planter, was intended to give some experiments in opposition to the editor's theory. Without presuming to question the soundness of Liebeg's views, but on the contrary adopting them unqualifiedly, I thought they might by reconciled with my own in this way. Gypsum requires to dissolve it from 300 to 500 parts of water, and when dissolved, it decomposes very slowly under the action of carbonate of ammonia; of course this slow and gradual process is calculated to fix the ammonia in the soil. But then, on the other hand, plaster attracts a vast amount of floating nitrogen or ammonia from the atmosphere, thus increasing the agent of decomposition (carbonate of ammonia) greatly. A large portion of the peculiar food of plants would thus be disengaged, so that under the action of plaster you would have a larger amount of ammonia fixed in the soil, and a larger amount appropriated by the plant, than you would have if it were not employed. This explanation accords with our experience of the influence of this manure, the "tendency of which" as you say, "is eminently to increase the bulk of vegetable growth, and therefore, when applied, to induce rust and mildew."

Concurring with me as you do thus far, you here fall back upon the position of the American Farmer, and suggest lime as an effectual preventive of the disease. To answer this great end, you suggest that the remedy should be such a one as would afford specific nourishment to the seed. Every analysis of wheat exhibits lime

and phosphate of potash among its constituents. This would bring us back again to the plaster of Paris, which is a sulphate of lime; but experience has shown, as you justly say, that this does not contribute much to the formation of seed, but acts more especially on the stalk and leaves. Lime, however, in other forms, both calcined and as it exists in the highly concentrated manure which is termed guano, has, you think, the desired effect on the seed. The experiment of J. L. Teschemacher, of Boston, is certainly very striking; while your own experience of the influence of calcareous applications in Maryland and other localities does certainly carry with them a force and weight which it is difficult to resist. Previous to the reception of your letter, I had seen it stated with great confidence in the Dollar Farmer of Kentucky, that ashes were an infallible protection against rust; and I have instituted a set of experiments upon wheat sown this fall to test it. I will now add some experiments with lime, and give you the results of both next summer.

Roanoke county is a limestone soil, the best portion of it, within memory of its oldest inhabitants, having been a prairie, which, according to Mr. Ruffin's theory, would show that our soil is strongly impregnated with lime, and which, with your theory added, should exempt us from the rust. We however have it, though I think we are not peculiarly liable to it. Kentucky, however, which is the purest calcareous soil I have ever seen, does seem to be peculiarly subject to this disease; so much so that her farmers have, to a very great extent, abandoned its cultivation as a staple.

I hope, sir, that you will continue to investigate this truly important question, with all the industry and research of which you are capable. Keep public attention alive to it until some useful and satisfactory result is reached, and you will have conferred a lasting benefit upon the community, which will entitle you to their warmest gratitude.

Wm. M. Peyton, Roanoke.

Recipe for making Good Bread.—James Roche, long celebrated in Baltimore, as a baker of excellent bread, having retired from business, has furnished the Baltimore American with the following recipe for making good bread, with a request that it should be published for the information of the public:

"Take an earthen vessel, larger at the top than the bottom, and in it put one pint of milk-warm water, one and a half pounds of flour, and half a pint of malt yeast; mix them well together, and set it away, (in winter it should be in a warm place,) until it rises and falls again, which will be in from three to five hours, (it may be set at night if wanted in the morning;) then put two large spoonfuls of salt into two quarts of water, and mix it well with the above rising; then put in about nine pounds of flour, and work your dough well, and set it by until it becomes light? Then make it out in loaves. New flour requires one-fourth more salt than old and dry flour. The water also should be tempered according to the weather; in spring and fall it should only be milk-warm; in hot weather, cold; and in winter, warm."

Foot-Rot in Sheep.—Mr. R. North, Jr., in a note to the Editors of the Cultivator, says, after trying several recipes for the foot-rot in sheep, which he had seen recommended in their paper, to very little or no purpose, he discovered by mere accident a cheap and sure cure, without much trouble or injury to the sheep, viz: "Take a few bushels of lime, and put it near some place over which the sheep have to pass, say the bars; and as it is natural for sheep to jump, take notice where they alight, and place the lime there, about three inches deep. This did effectually cure my flock in about one week. The lime should be fresh and slacked, and not less than three inches deep; if deeper, it might take the hair off the leg above the hoof."

IMMENSE SUCCESSIVE CROPS OF WHEAT—MODE OF MANURING, &c.

In our paper of the 21st ult. we gave an extract from an essay of S. H. Black, Esq., in which he stated that Adam Whann, Esq., of Elkton, Maryland, had raised wheat on a ten acre lot for four successive years; that the product had averaged 400 bushels per year, or 40 bushels to the acre, and that the lot was then in wheat, making the fifth consecutive year. Appended to that extract, we made such comments as the extraordinary nature of the case appeared to justify, and respectfully called upon the venerable owner of the lot to favor the public with answers to certain queries which we took the liberty of submitting to him. To those queries Mr. Whann has made a prompt and satisfactory response, as will appear by the annexed communication.

There are two features about Mr. Whann's culture, that go to astound us. The first is, that such heavy crops should, without change, be grown for five successive years on the same land; and that such success should have attended his wheat crop after being manured with stable manure; for *that*, with the exception of the burning of the stubble one year, was the only manure which his lot received during the whole period it was in wheat. The growing of successive crops of the same grain upon the same land, and the manuring of wheat with stable manure, are both opposed to the approved theory of rotation of crops, and he who should undertake to do either, at this day, would be considered a bold experimenter, if not a daring innovator. In England, as well as in this country, it is considered that the rust, in a majority of cases, will attack any wheat thus manured, and yet in the case of Mr. Whann, although, in some instances, his neighbors' wheat was rusted, his escaped unscathed. It is not our intention to attempt to determine to what cause this immense product is to be ascribed, and for the very obvious reason that we feel uncqual to such task; but it may be profitable to note the facts as presented, so as to elicit inquiry by experienced wheat growers. And with that object we will endeavor to present the results in such form as to be the most striking to the eye of the reader.

In the first place it may be well to remark, that the lot had been cleared for many years, and had been a considerable time in clover and timothy.

The following will show the course of treatment and crops:

First year—Corn; ploughed and harrowed; manured with clover ley; product of the ten-acre lot, 850 bushels; product per acre, 85 bushels. Second year—Barley; ploughed and harrowed; without manure; product of the ten-acre lot, 350 bushels; product per acre, 35 bushels. Third year—Wheat; ploughed and harrowed twice; manured with stable manure; product of the ten-acre lot, 422 bushels; product per acre, 42 1-20 bushels. Fourth year—Wheat; ploughed and harrowed; manured with stable manure; product of the ten-acre lot, 400 bushels; product per acre, 40 bush. Fifth year—Wheat; ploughed and harrowed; manured with stable manure and burned stubble; product of the ten-acre lot, 350 bushels; product per acre, 35 bushels. Sixth year—Wheat; ploughed and harrowed; manured with stable manure; product of the ten-acre lot, 400 bushels; product per acre, 40. Seventh year—Wheat; ploughed and harrowed; manured lightly with stable manure; product of the ten-acre lot, 300 bushels; product per acre, 30 bushels.

By examining the above, we find that this lot, out of a course of culture of seven years, was five years in wheat; that during each of those latter years, the ground was enriched with stable manure, and that, notwithstanding the application of this heating substance, it continued to yield immense crops, making an average acreable product of more than 37 bushels of merchantable wheat; that the falling off in the last of the five years, is accounted for by Mr. Whann, who ascribes it to his sowing white wheat instead of red, on one half of it. The half in white only yielding 100 bushels, while that in red produced 200, being equal to any of the preceding years but the first, so that in fact there could not be said to have been any falling off in product, that was not produced by an error in substituting one kind of wheat for another. Let us point out the system pursued by Mr. Whann:

He ploughed once and harrowed twice.

He sowed early, viz: on the 15th of September in each year.

He sowed two bushels to the acre.

He changed his seed each year.

He manured with stable manure and lime—and

The kind of wheat which he found best was the red chaff.

We think it was by his early sowing, that he was enabled to escape the rust, and may it not have been the vigorous growth of the wheat plants, superinduced by the stable manure, that induced them to resist the fly. We merely suggest this opinion, and will mention that Earl Stimson, of Saratoga county, New York, always makes his wheat crop the first in rotation, and manures it both with barn-yard manure and leached ashes, in the proportion of five loads of the former to three of the latter. His crops of wheat average from 30 to 40 bushels to the acre, in fields of 50 and 60 acres. We allude to this latter fact with the view of letting our readers see that Mr. Whann's case is not an isolated one, and that he does not stand solitary and alone in the successful application of animal manure to wheat.

With these remarks we will call attention to the subjoined letter from our venerable and respected correspondent:

Elkton, January 6, 1843.

Dear Sir—I observe in your paper of the 21st ult., a request that I should give you some information respecting five successive crops of wheat grown on a ten-acre lot which formerly belonged to me at this place. The lot was clear of timber as long as I had any knowledge, except two or three black walnut trees. The soil is a light sandy loam mould; it had been in clover and timothy for some years, then put it in corn, and it produced 850 bushels of good sound corn, then ploughed the next spring, and 20 bushels of barley sowed, produced 350 bushels. That fall manured over with stable manure, ploughed once, and 20 bushels of good red chaff wheat sowed and harrowed each way. The produce was 422 bushels wheat, weighing 61 lbs. to the bushel; the second year manured over with stable manure and ploughed once as before, limed and harrowed in, produce 400 bushels. Third year being a very dry season, ploughed a few furrows round the lot and set fire to the stubble and turned it into the earth; then gave it a light coat of stable manure ploughed once, limed and harrowed as before; produce 350 bushels.—Fourth year covered over with stable manure, ploughed once and harrowed as before, produce 400 bushels. Fifth year covered over lightly with stable manure, ploughed once, limed and harrowed in as before, produce 300 bushels. I sowed my wheat about the 15th September, never ploughed but once a year, and harrowed in both ways, changing my seed every year. It was not disturbed by any insect during that time. Some of my neighbors complained of the fly and rust affecting their crops, but mine was not affected with either. I attribute the small crop of the fifth year to my having seeded one-half the lot with white wheat—the produce of that half was only 100 bushels.

Respectfully your friend,

Adam Whann.

Coffee, from sweet potatoes, is warmly recommended. The potatoes are pared, sliced, roasted, ground and steeped, like the coffee berry. It is said to be very palatable, has the flavor of cocoa, and requires little sugar.—*Ex. paper.*

What an age and a country this, when and where people may "luxuriate" on sweet potato coffee and cornstalk sugar—*Boston Cultivator.*

WEDNESDAY, MARCH 22, 1843.

☞ We appeal to every subscriber to the "Southern Cultivator" to make an earnest and zealous effort to extend its circulation.—There should be from 50 to 200 subscribers in every county in the State—and if the friends of the cause will make the effort, they can be readily obtained. It is a matter of interest to every reader of the paper, for in proportion as the circulation is extended will its usefulness be felt and appreciated, and its capacity to do good be greatly facilitated.

CORN-STALK SUGAR.

The importance of this subject to the planters of Georgia and the South generally, where corn grows so luxuriantly, should commend the article copied into another part of this paper, from the report of the Commissioner of the Patent Office, to the careful perusal of every reader.—It is particularly a subject of deep interest to the cotton growing States, as affording another, and perhaps profitable, field for the employment of a portion of that labor now bestowed on the culture of our great staple—the price of which is so low as to demand that a portion of the labor heretofore employed in its production, should be diverted to the growing or manufacturing of other articles of consumption, to which we have heretofore paid no attention. We expect not that any portion of our planters will suddenly embark extensively into the making of corn-stalk sugar—such a course would not be dictated by prudence or a sound discretion—but we do anticipate that the result of the experiments heretofore made, will induce many to make the experiment on a small scale, and at a very limited expense, in order to test its practicability in this climate, which we doubt not will be found much more congenial than the Northern, Middle or Western States, where success, to some extent, has crowned the labors of those who have embarked in it. The process is indeed simple, and may be tested in a small way at a very trifling expense, and we do hope some of the more enterprising of our planters may be induced to make a trial.

Brine.—One of our citizens, a grocer, informs us that he has, for a few years past, been in the habit of emptying the brine from his pork and fish barrels on his asparagus bed; and he thinks none of his neighbors have better asparagus than he. The effect of the brine is entirely to destroy the weeds, while it makes his plants much more thrifty. And why is not this reasonable? Asparagus is known to be a marine plant, and is found in abundance in many places along the shore of the ocean.

Ed. Farmer's Gazette.

RUST IN WHEAT.

Under this head, in another part of this number, the reader will find a very interesting correspondence between Mr. Pleasants and Mr. Peyton, of Virginia, to which we invite attention. There is, perhaps, no section of the Union where the wheat crop sustains a greater injury, in proportion to the quantity cultivated, from rust than the South, and it is therefore of the highest moment, to all who attempt to cultivate this important bread stuff, to understand the causes, and, if possible, apply the remedy. Such indeed has been the extent of its ravages for a series of years in some sections of the country, that many planters have ceased to cultivate wheat at all, and rely exclusively upon the importation of their flour from abroad. Every possible effort should therefore be made to discover the cause of the disease, and, if possible, remove it—for the importation of flour alone into the cotton growing States is no inconsiderable item, and if by any means the culture of wheat can be so improved as to enable us only to supply the home demand, it will be an important point gained, the advantages of which cannot be readily ascertained.

THE POTATO.

It is, perhaps, not generally known to the subscribers of the Farmers' Cabinet, that in the potatoe there are two parts, which, if separated and planted at the same time, one will produce tubers fit for the table eight or ten days earlier than the other. This fact has fallen under my own observation, and is the plan I now pursue in order to obtain an early supply for my table, fine and very mealy. The apex or small end of the potato, which is generally full of eyes, is that part that produces the earliest—the middle or body of the potato produces later, and always large ones. The butt or navel end is worthless, except for feeding stock, and, if planted, produces very indifferent small ones, and often none at all, the eyes, if any, being imperfectly formed. The potato being cut two weeks before planting, and spread on a floor, that the wounds may heal, separating the small ends from the middle, then cutting off the navel or butt, the body or middle of the potato is then divided into two pieces lengthwise, taking care to have always the largest and finest selected, being convinced that if none but large potatoes are planted, large ones will be again produced—small things produce small things again, and therefore no small potatoes should be planted; this practice is too prevalent, and may account for the many varieties and small potatoes met with in our markets. Who would not prefer a large mealy potato to a small one, that will take hours to boil soft, and then may only be fit to feed the cattle with?

For several years past I have adopted the plan of putting potatoes into the ground late in the fall, covering them with manure, sometimes with tanner's waste bark, and always have succeeded in raising a fine early crop. Last fall I had taken up some as fine and large Mercer potatoes as any one could wish; they were covered with tan six inches thick the preceding fall; many weighed sixteen ounces. No particular care or attention was bestowed upon them thro' the summer, the tan not permitting any weeds to trouble them, or to draw out the nourishment from the earth, they had therefore all the benefit of the soil, kept moist and clean by the tan, for tan will keep the ground moist and clean and in an improved state in the driest season. I have found the great advantage of it to my asparagus and strawberry beds, which are annually covered with it.

The potato I consider so valuable and indispensable a vegetable, and having never seen a suggestion in print of separating the potato and planting each by itself, that I have been induced to send you this imperfect and hastily drawn up communication. Perhaps you may think it worthy a place in the Farmers' Cabinet, and if so, should be pleased to hear that some of its patrons will try the experiment of planting separately each part of the tuber, believing that the potato may be much improved by a due regard to the above suggestions. J. F. H.

Farmers' Cabinet.

BLACKSMITH'S WORK.

As many of our farmers have blacksmith's shops of their own, the following directions for working steel and making edged tools, plain and simple as they are, may be of great value to them if carefully enjoined upon their smiths, who are frequently great bunglers in this kind of work.—*Southern Planter.*

"Working Cast Steel.—We have recently obtained information on this subject from the most skilful and celebrated workman in the United States, Capt. J. Hill, of Billerica, Massachusetts. We were a little surprised to learn the difference in the management of cast steel, from that of the German. There is something yet remaining mysterious with regard to the nature and management of this article, which no cyclopedia or other vehicle of intelligence have as yet developed. The process of manufacturing cast steel, it is not our purpose at present to describe; but it is evidently composed of refined iron and carbon in very nice proportions. In the process of shaping it into cutting blades and other articles, it is heated and hammered in the manner of other steel: when tempered for this purpose, it is first heated to a full cherry red, and plunged into water till cold. It may then be held over a moderate charcoal fire, until the color of any part which has been filed or made bright after hardening, changes to a reddish orange color. This is the temper for cutting tools: but if a spring temper is required, it is heated over the charcoal till the color approaches a blue; or rather, blue inclined to red. In either case when the steel is brought to show these colors, it is to be plunged in oil—common lamp or linseed oil—which will not affect the color. If the steel is to be rendered soft for turning or cutting, it must be heated to a full red, and left to cool in partially ignited charcoal; in this way it may be made so soft as to be cut or turned into shape as easily as copper, or even common pewter. But the most curious and peculiar process is that of welding. In welding iron, a white heat is indispensable, as every body knows: but not so with cast steel. When the steel is to be welded to iron, neither are to be heated above a full cherry red. The two parts are to be previously lashed or *griped* together, and in that condition heated: they have then only to be immersed in calcined borax; or to have the prepared borax (borate of soda) sprinkled over the joint, and are ready to adhere by being hammered together. The borax for this purpose is to be prepared by being previously heated to a full red, and kept heated till it becomes a soft powder like flour. What the chemical effect of the calcined borax on the metalic surfaces is, is not perfectly understood, farther than that its affinity for oxygen is such as to deprive the jointed surfaces of any portion of oxygen which might prevent a ready union of the surfaces. When small pieces of steel are to be welded, they are to be heated to the full cherry red, and immersed in the calcined borax, and are then to be hammered together. The most extraordinary point in the process is the fact; that if the steel is but a little overheated, it will immediately crack into fragments; but by a shifted process, and with the use of borax, the cracks and defects may be healed and rendered sound and solid. We have witnessed the fact, that by a judicious management, a fine tempered cutting edge of cast steel may be bent, warped and hammered, and its shape materially changed, without breaking, or affecting the temper. More may be said on this

subject in a future number; but we close for the present with the remark that even Anderson & Co., the celebrated manufacturers of cast steel, are evidently unacquainted with all the merits of its peculiar properties.—*Amer. Mechanic.*

TO MAKE PERMANENT MARKING INK.

Take six and a quarter cents worth of lunar caustic, and, having put it in an ounce vial filled with vinegar, cork it tight and hang it in the sun. In a couple of days, it will be fit for use.

To make the preparation for the above, take a lump of pearlash the size of a chesnut and dissolve it in a gill of rain-water.

The part of the muslin which is to be written upon is to be wet with the preparation, and dried and glazed with a warm flat-iron: immediately after which it is ready for marking.

A little vinegar, in which a rusty nail has remained for a few days, makes a mark on linen which is not easily obliterated---forming what is commonly called iron-mould.

Louisville Journal.

JOSIAH QUINCY, President of Harvard College, has one of the finest farms in the vicinity of Boston. It is extensive and surrounded by a flourishing hawthorn hedge, but there is not an interior fence on the premises; the whole presents a single field, devoted to all the various purposes of agriculture. No part of it is allotted to pasture, properly speaking, as his cattle are fed in their stalls and never suffered to roam over the fields—and the advantages of his system are thus given: Formerly there were seven miles of interior fences to be kept in repair, but by keeping his cattle up the whole of this expense is saved. Formerly sixty acres of this farm were devoted to pasture; but now a greater number of cattle by one-third are kept on the products of twenty acres, and the cattle are in the best condition.

The saving by these means is enormous, and the immense advantages arising from it are too apparent to need to be dwelt upon. During the summer the cattle are fed upon grass, green oats or barley, cut the day before and suffered to wilt in the sun, but the manure which is thus saved will more than pay the extra expense and trouble. The farm is most highly cultivated, and every kind of grain and vegetable has a place.

TO CURE SHEEP SKINS WITH THE WOOL ON.—Take a spoonful of alum and two of saltpetre; pulverize and mix well together, then sprinkle the powder on the flesh side of the skin, and lay the two flesh sides together, leaving the wool outside. Then fold up the whole skin as tight as you can and hang in a dry place; in two or three days, as soon as dry, take down and scrape with a blunt knife till clean and suple. This completes the process, and makes you a most excellent saddle cover. If when you kill your mutton you treat the skins in this way, you can get more for them from the saddler than you can for the wool and skin separately disposed of otherwise.

N. B. Other skins which you desire to cure with the fur and hair on, may be treated in the same way.—*Selected.*

NEW METHOD OF GROWING ASPARAGUS.—The editor of the Horticultural Magazine, recommends a trial of the following method of growing asparagus, which is practiced at Nice, and of which a high account is given in the London Gardeners' Chronicle. Take a quart wine bottle, invert it over the head of a stalk of asparagus just rising from the ground, and secure it by three sticks so that it cannot be knocked over. If left in this state, the asparagus will grow up into the interior of the bottle, and, being stimulated by the unusual heat and moisture it is then exposed to, will speedily fill it. As soon as this has taken place, the bottle must be broken, and the asparagus removed, when it will be found to have formed a thick head of tender delicate shoots, all eatable, and as compact as a cauliflower.

AGRICULTURAL FACTS.

Let every farmer and gardner whose eye rests on the heading of this article, consider himself most earnestly entreated by us to send us "facts," or even a single "fact" which may come to his knowledge, in his practice in his rural business. No matter how unimportant a "single fact" of this kind may appear to the narrator, it may become of incalculable utility to the community. No matter in how rude a form it may come to us, we can so polish the rough gem, that it may come out a diamond in value. What could not be effected for the common agricultural interest, if the farmers of the West would only send us the unstudied results of their experience, in every particular instance of an apparently new discovery? If we could only get them into this most valuable habit, each would be reaping the benefit of the other's labors, and be adding to the general store-house of information. We will leave it to their choice whether to sign their names or initials only, to their communications, but the names seem the most honest way. Come good friends of a common cause, send in your "facts," or but one "fact," in any manner you please, connected with the cultivation of the grains, the grasses, farm stock, implements of husbandry, manures and the manner of applying them, and the rest of the innumerable points of interest relating to the great fundamental building of man's wants and happiness in this physical department of his condition.—*West. Farmer.*

OXFORD SAUSAGES.

The following recipe for making the celebrated Oxford Sausages, so much desired by the lovers of good eating in England, is from a late English publication:

INGREDIENTS.—One pound and a half of pig meat cut from the griskins without any skin, and a half a pound of veal. One pound and a half of beef suet, the yolks and whites of five eggs. A dessert spoonful of sifted sage, after being well dried. Pepper and salt to taste.

TO MAKE THE ABOVE INTO SAUSAGES.—Chop the meat into small pieces and then pound it together in a marble mortar till it is short and tender. Chop the suet very fine, and when the eggs are well beaten together, after the white specks are taken out, pour the liquid over the pounded meat and chopped suet, well kneading it together with a clean hand, throwing in the sifted sage, and pepper and salt from a coarsish pepper box during the operation, so as to let them impregnate the whole mass without being predominant in any part of it.

Press the whole when well mixed together into a wide mouthed jar, and keep it from the air in a cold place.

Roll the sausages on a flour board and use very little grease in frying them, as they will be fat enough to fry themselves with the aid of a frying pan.

DISTEMPER IN DOGS.—We published in a late number a remedy for this disease, copied from the Southern Planter. We have often succeeded in curing the disease, by administering doses of salt as recommended therein; we have, however, whenever we discovered a constipation of the bowels to supervene, given every other day boluses of castile soap, with the very best effects. If castile soap cannot be had, brown soap will answer equally well, the object being action upon the intestinal viscera. In obstinate cases, where the discharge from the nostrils is obstructed, or the cough heavy and tight, we have always found the patient greatly relieved by introducing a seton in the loose skin just back of the head; which operation is performed by threading a coarse darning needle with a double thread of coarse yarn, and running it through the skin and confining it by a tie. The thread must be moved every morning to keep up irritation, and encourage a discharge of the viscid matter, which should be daily washed off with a little warm water and soap.

American Farmer.

FOUNDER.---I lately had occasion to try a recipe published in your valuable periodical, with the most complete success. Not long since, my barouche horse being badly foundered, I had holes dug in the ground, nearly knee deep, and filled with water; the water was then heated with hot stones, and the horse led into it, where he was kept for two or three hours. At the same time, I had him well bathed up to his shoulders and hips with hot water, and then rubbed dry. On the second morning, he started on a journey of two hundred miles, which he performed without any apparent inconvenience at all.

Your obedient servant, W. H. DUPUY.

Southern Planter.

BEESWAX.---The neatest way, says the Farmer's Cabinet, to separate beeswax from the comb, is, to tie it up in a linen or woollen cloth or bag, with a pebble or two to keep it from floating; place it in a kettle of cold water, which hang over the fire; as the water heats, the wax melts and rises to the surface, while all the impurities remain in the bag.

AUGUSTA MARKET.

WEDNESDAY A. M., March 22.

Cotton—Since our last report the weather has been so unfavorable for business that but few sales have been made, and the market cannot be said to have fairly settled down since the accounts per Great Western from Liverpool.—The prices range from 3¾ to 6 cents as extremes, while the great majority of the sales are from 4½ to 5¼ cents.

Trade—The unfavorable character of the weather has also operated upon the general business, and but a limited amount of trade has engaged dealers for the past week. To-day, however, we have a bright, clear sky, with a bracing west wind, and as our merchants in every branch of trade are being replenished daily with seasonable goods, they hope for a cheering spring trade.

Exchange—The market continues abundantly supplied with sight exchange at par on all points north and east of us. Central money is stationary at 25 to 30 per cent discount—principal sales 27. Alabama money is at a discount of 20 to 25 per cent. The amount of other depreciated money offering is so small that there are no fixed rates.

CONTENTS OF THIS NUMBER.

	PAGE.
Remarks on the Manufacture of Cornstalk Sugar	17
Remedy for Cholic in Horses	19
Hon. W. C. Rives' Address	20
Rust in Wheat	21
Recipe for making good Bread; Foot Rot in Sheep; Coffee from Sweet Potatoes; Immense Successive Crops of Wheat	22
Editorials; Brine; the Potato; Blacksmith's Work	23
To make Permanent Marking Ink; President Quincy's Farm; to cure Sheep Skins with the Wool on; New Method of growing Asparagus; Agricultural Facts; Oxford Sausages; Distemper in Dogs; Founder; Beeswax; Augusta Market	24

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CORN STALK SUGAR.

Numerous experiments have been tried in various parts of the country, the past year, with respect to obtaining sugar from the corn stalk.

I could, indeed, hardly be expected that persons entering into it without much knowledge of the process of manufacture, and, in many cases, never having been furnished with any plan on which to conduct it, and possessing no requisite marhinery, and before the difficulties attending its granulation had been removed, would be successful in their efforts. Yet the results have every where been so satisfactory, that though but little sugar has been made, no one person from whom we have heard, expresses a doubt of its entire practicability, or the least discouragement. On the contrary, they, one and all, confidently assert that the product will yet become a great staple in our country. An excellent molasses, or syrup, has usually been obtained; and were this the only thing secured, yet, in this point of view, it would doubtless prove a great desideratum.

Mr. Webb of Wilmington, Delaware, to whom the country is so particularly indebted for introducing this discovery to notice, and for his perseverance in demonstrating its practicability, made a definite experiment on a certain amount of land, sown as he had before recommended. Speaking of his former views, he says: "These anticipations have been more and *more confirmed by every succeeding step in the investigation.*"—He says further: "There was no deficiency in the *corn;* it was entirely in our mode of treating it; and, after all, the failure was only in crystalization." It appears that the corn was fully ripe before the least preparation had been made for manufacturing it; and, after this, delays were occasioned by breakages, incident to new machinery, by which the progress was so hindered that a considerable part of the crop was killed by the frost before it could be ground. He goes on to observe that the greatest part of the sugar he obtained was from this frost-killed corn, and says: "This fact is important, as it shows the superiority of the corn over the cane." In this point it would seem he is mistaken, according to the account above given of the cane crop of Louisiana. He further says: "We obtained 50 gallons of syrup, which (being boiled to the density of sugar,) was much richer and better than the best sugar house molasses; part of it was sold at $1 per gallon. We also had 10 gallons of syrup evaporated in broad shallow vessels; this crystalized readily, and made good sugar." Again: "Besides the products above mentioned, we obtained from the acre about 40 gallons of vinegar. The fodder was equal in value to two tons of hay; and there were 20 cart loads of stalks after passing the mill. One-fourth of the crop was lost in consequence of being prostrated by a storm late in the season, and another fourth from the stalk being imperfectly pressed. Considering every thing, the result is satisfactory." A fair review of the progress of this experiment fully justifies his language: "I do not think that any manufacture ever promised better, in the early stages of its introduction." In the Farmers' Cabinet for January, 1843, a correspondent of that journal, whose opinion seems entitled to consideration, remarks: "Few persons would be apt to calculate the expense attendant on even a small experiment in the making of sugar, whether from the cane, the beet, or the corn stalk; all who know any thing about it, however, are aware of the fact that the process, even from the first, is proverbially laborious, careful and expensive."

"Mr. Webb's apparatus cost him about $300. I should rather add $1000 to that sum. In my own opinion, the cause of the failure in the attempts to make sugar from the beet has arisen from the single circumstance of its never having been taken up on a sufficiently extensive scale. In France, there is no difficulty or delay experienced; but there the machinery is equal to the labor required." The writer also refers to Mr. T. Morgan, of Louisiana, and says "that, according to his experience, the juice of the cornstalk, as stated by the saccharometer, is *two tenths* stronger than the juice of the Louisiana sugar cane—a circumstance accounted for by the fact that the cane does not fully ripen in Louisiana, so that the juice is incipient."

On the other hand, the corn ripens perfectly, and then affords a juice properly corrected and matured, and hence defecation of it is remarkably easy. He further says: "I have been informed that Mr. Morgan was so well satisfied of the cultivation of the cornstalk for the purpose of making sugar, that he, the last year, gave orders for the growth of a certain breadth on his sugar plantation in Louisiana, the past summer, so as to give him a full boiling of juice for his vacuum pan, that the trial might be made on a scale sufficient to produce actual results, by which to calculate, in a pecuniary point of view, the real value of the cornstalk in the manufacturing of sugar, but that his intentions were frustrated, levelled to the dust, by a storm, which prostrated the corn, and entirely ruined his prospects." Speaking of some samples of sugar manufactured by Mr. Webb, he says: "It has been objected, that the grains are not so large and fully developed; it is only a wonder that any grains at all should be made to appear, from the manner in which the granulating process had been compelled to be carried on. Mr. Morgan, with his 10,000 gallons of liquor, at 45°, would soon be able to give a better account of the matter."

Mr. Blake of Indianapolis, in Indiana, also tried an experiment on a large scale; but not having as much previous knowledge of the process as Mr. Webb had, did not succeed in obtaining sugar. He says that he made in all, out of about 4½ acres, about 270 or 280 gallons thick syrup; 25 gallons of the juice ma le 4 gallons of the syrup; and he is well assured that he left in the ground corn one-third of the juice. His corn was planted four feet wide, and drilled one way. He planted about six acres, but a portion of it was prostrated by a storm, and so was not used. He found that wooden cogs and journals for the mill would not answer, and recommends iron-bound and iron-plated, and metal cogs and journals. He had no previous knowledge of sugar-making, of any kind, and of course had to encounter all the difficulties of a learner.—For boiling, he used common 15 gallon iron kettles. The great difficulty he found was in arriving at the graining point in boiling. His plan was to boil the juice of the cornstalk, as soon as the scum was removed, down to a strong syrup, and then put it into a cooler, or large tub, having two or three inch holes, one in a level with the bottom, the others an inch and a half from the bottom, and let it remain to the next day, and then boil it down to the graining point. He says also, "my main object in trying the experiment was to ascertain whether cornstalk contained saccharine sufficient to make it an object to cultivate it hereafter, as one of the great staples of our State. On this point, I am satisfied that, in a few years, it will become an article of export and of great value to the west."—"My molasses is esteemed by all who taste it, to be superior to New Orleans." "From experiments I made when I had got my mill to work well, I could grind 300 gallons of juice in about 18 hours' work, with two horses, allowing one hour for each horse at a time; two boys could attend the mill with ease."

"From the best estimate I can make of the cost per acre, in removing the ears, blading, topping and cutting, hauling, grinding and boiling, &c., it was between $12 and $15. Of course, it would have cost much less, if I had been as well organized as I could be, were I to carry on the business upon the same scale hereafter; boys can do most of the work." He also expresses his full intention to go into the business with a view to permanency and profit.

Others also in Indiana, tried the experiment with various success, and by a communication from Mr. Plummer, of Richmond, in that State, it appears that, in all cases, the success equalled expectations as to the quantity per average acre; but the quality was not so fine as expected, and it was supposed some added more cream of lime than was necessary. The sugar, however, proved equal to about second quality New Orleans. He also remarks, that they found wooden rollers would not answer as well, as they were liable to cut in ridges, and thus much of the saccharine matter was lost. He further suggests, that, by planting the corn some days apart from each other, one mill might serve a number of persons, and thus the expense be lessened. The farmers there, he adds, as an evidence of their confidence, do not expect to open their sugar trees again.

The conclusion is expressed by several, that from 600 to 1000 pounds of sugar may easily be procured from an acre.

Another person speaks of obtaining half a gallon of syrup from a bushel and a half of crushed stalks. Mr. Goodrich, of Terre Haute, in Indiana, is also stated to have produced from eight gallons of juice two gallons of molasses, pronounced by competent judges equal to the best sugar-house molasses.

Mr. James T. Gifford, who tried some experiments with the corn stalk, on examination, found that the butt of the stalk remaining in the field retained its juice and saccharine matter until the hard freezing in November caused fermentation to commence, from which time the saccharine matter was too acid. It is also said that sugar has been made of the water in which the ears of corn have been boiled; from whence it has been inferred that the cob contains much saccharine matter. Mr. Knapp, of Waynesville, Illinois, in a communication made to the Union Agriculturist, for October, published at Chicago, says: "I hasten to say, briefly, that I have made about six gallons of maize molasses from what was judged (not measured) a barrel of expressed juice of the stalks. I find there is no difficulty whatever in clarifying the juice with hydrate of lime, skimming until it boils, and then straining through flannel. An immense quantity of extractive matter in the form of a

fawn-colored precipitate is thus speedily got rid of, and the evaporation is then conducted in the same manner as in making maple sugar. There are two other mills in this neighborhood. At one of them, sixty gallons of molasses have been made from an acre. In regard to crystalization, I entertain no scruples, when the evaporation is conducted properly and carried to the proper points." The experiment has been also tried, it is said, in South Carolina, even to granulation, without difficulty, with perfect success; and confidence in its importance as a production is expressed.

In the number of the Albany Cultivator for January, 1843, a correspondent writes from Ohio, and, referring to an experiment of his own, says: "The result of this experiment has led me to the following conclusions:

"1st. That Mr. Webb's statement of the amount of sugar which can be made from an acre is not overrated.

"2d. That stripping the ears from the stalk is essential in the production of sugar, though not essential in the production of a much smaller quantity of excellent molasses.

"3d. That large stalks yield much more juice than small ones in proportion to their size, and that, consequently, the corn should be grown in drills, and not by sowing broadcast.

"4th. That the principal labor in making sugar from the cornstalk consists in stripping off the leaves, and that this is most expeditiously accomplished before the stalks are cut.

"5th. That three quarts of juice will yield saccharine matter equal to one pound of sugar; or that eight gallons of juice will make one gallon of thick molasses.

"6th. That the manufacture of sugar from cornstalks is an object well worthy the attention of every family who has even one acre of ground to cultivate."

Such are some of the results of very imperfect experiments, the first year after the announcement of the fact that sugar can be made from the cornstalk. They were commenced and prosecuted, in most cases, with the simple view of deciding a question on which, probably, nearly all who had just learned that such a thing was asserted, were, to say the least, somewhat skeptical. They, too, had no conveniences for the manufacture; and yet, with all these drawbacks to success, the question may be considered as fairly settled by a number of independent witnesses, who need only a knowledge of the process, and skill and experience in conducting the trial hereafter, to ensure complete success.—In order to aid in this desirable object, and as so many are interested in whatever may throw light on the subject, Mr. Webb's account, originally drawn up for the National Agricultural Society, will be subjoined in Appendix No. 3.

As numerous inquiries also have been made respecting the best process of clarification, a communication detailing the mode has been obtained from Professor Mapes, of New York, who has paid much attention to the subject, which will be found in Appendix No. 4. He, also, as will be perceived, expresses his conviction, from some experiments on the cornstalk, of its entire superiority over the sugar cane, if the enthusiasm of those who made the former experiments published did not lead them into errors.

The French scientific journals contain some notice of this subjebt, and a belief is there expressed that sugar can be manufactured from the corn stalk, and from the *fig cactus* found in the recent French possessions in Africa.

There are some facts stated in relation to the manufacture of sugar from the cane, which as they may apply also to that from the corn stalk, it is thought proper to subjoin. They have been mostly derived from Porter's Treaties on the culture of the cane. At 10° of Beaume's saccharometer, it is said, there are in 100 lbs. of cane juice or syrup 18 lbs. 6 oz. and 1 dr. of sugar. This, it will be perceived, is not more, if as much, as Mr. Knapp and others obtained from the corn stalk. The weight of water, besides what is termed the water of solution, to be evaporated to reduce the cane juice to a state of saturated solution, is 70 lbs. 9 oz. 6 dr. A saturated solution of cane juice contains five parts of sugar and three parts of water. This is indicated by 34° of Beaume at the temperature of 82 Fahrenheit. Seventeen ounces of lime are used for 300 gallons of juice. The greatest danger seems to be of using too large a proportion of alkali. The highest production of 100 gallons of cane juice for nine years average, on an acre of an estate selected in Jamaica, is stated to have been 122 lbs. of sugar. The experiments above cited, with respect to corn stalk, would show an equal, if not a greater average. It is evident that the whole difficulty of granulation may be obviated by boiling immediately and quickly in not too large quantities. The paper of Professor Mapes, in the Appendix, already referred to, will also furnish valuable information on this point. The Southern States, who have herctofore been engaged in the manufacture of cane sugar, possess peculiar advantages in this respect, as they are already provided with the requisite machinery for grinding and boiling, and can apply their already acquired skill no doubt with great effect. Hence, we need not be surprised, if we should hereafter find them taking the lead in this business. It is a truly gratifying reflection, that, while the temperance reformation is so greatly lessening the consumption of corn in the manufacture of whiskey, the introduction of this manufacture of corn stalk sugar promises to furnish a much more profitable as well as salutary application.

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The following directions for its manufacture, furnished by Dr. Naudain, of Delaware, are the most clear and precise that we have seen:

"The fact that sugar can be made from the stalk of corn is one of recent discovery. It has already excited a deep interest in the public mind, and every thing relating to it is looked for with much interest.

"The writer has become possessed of some facts which may materially aid others in the present experimental state of the business. For as yet it is experiment, although enough is known to convince the most skeptical that the probability is that sugar from Indian corn will be, at a future and not very distant day, one of the great staples of the country.

"Without further remark, then, it should be remembered that as much corn-stalk as possible should be grown. To do this, the corn should be planted as broom-corn is commonly planted, very close in the row, probably a stalk every three or four inches. The tillage will be the same as for broom-corn. When the young ears begin to appear, it is necessary to pluck them off carefully, and to repeat the gathering as often as necessary, so as *to prevent the formation of any grain.* Because, if grain be allowed to form, it takes all the sugar from the stalk.—About the time the corn begins to harden, the making of sugar should be begun. It is not necessary to say any thing about a proper mill to crush the stalk and separate the juice, because mills of the cheapest kinds only should be employed now, until the business would fully warrant an expensive outlay. It would probably be found that the common cider mill, with plain cylindrical nuts, would be quite sufficient for a farmer who would raise a fourth or half an acre of corn for sugar for his family, and this quantity would be quite sufficient for satisfactory experiment.

"When the juice is separated from the stalk, about a table spoonful of white wash made of the *best quick lime*, and about the consistence of thick cream, should be added to each gallon of the juice, and then the boiling should commence. The scum that rises should be carefully removed; and the juice, if this process has been properly and carefully conducted, will be quite clear and nearly colorless. Then commences the process of evaporation; and when the juice has boiled down in about the proportion of eight gallons to one, the boiling will be completed, and it may be poured out into a shallow tight wooden box to grain.

"It has been ascertained, although as yet the reason is unknown, that if the juice be boiled in a deep vessel, like the common cooking vessels, sugar will seldom be obtained; while if it be done in a shallow vessel, so that the juice at the commencement of the boiling shall not be more than three to five inches deep, sugar would be obtained without difficulty. It has been ascertained also that the sugar from corn will not grain so readily as that from the sugar-cane.—And in some instances it has remained more than a week after the boiling before the sugar was formed, and yet excellent sugar made.

"It should be *particularly remembered* that the juice should be boiled *as soon as separated from the stalk.* It becomes acid very soon, and no sugar can be made if the juice be allowed to stand two or three hours before it is boiled. The juice will even spoil *in the stalk* before it is ground, if the stalk be cut off a few hours before grinding. It is necessary then that every part of the process should be done with the greatest despatch. The stalks should be brought to the mill as soon as cut, and ground immediately. The vessel for boiling ought to be properly filled in an hour, or at most two hour's grinding. And the process of boiling down should immediately commence and be continued until completed.

"Excellent syrup, superior to the best molasses, will be obtained by observing the above directions, and boiling five gallons of juice to one gallon.

"The juice of the corn-stalk is very rich in sugar when cultivated in the manner suggested. Tested by Beaume's sacharometer, the instrument used to measure the strength of syrups, the juice of the corn-stalk weighs 10 to 10½ degrees, which is about the weight of the juice of the best cane in the West Indies, and is richer than the juice of the cane in Louisiana, which is seldom heavier than 8½ degrees.

"One gallon of juice will produce nearly 1½ pounds of sugar; and an acre of good corn will yield, if carefully expressed, from 700 to 1000 gallons of juice."

CURE FOR A FOUNDERED HORSE.

I send you the following prescription, which you may give a place in your useful paper, if you think it will be of any advantage to planters and travellers.

As soon as you find your horse is foundered, bleed him in the neck in proportion to the greatness of the founder. In extreme cases, you may bleed him as long as he can stand up. Then draw his head up, as common in drenching, and with a spoon put far back on his tongue strong salt, until you get him to swallow one pint. Be careful not to let him drink too much. Then anoint around the edges of his hoofs with spirits of turpentine, and your horse will be well in one hour.

A founder pervades every part of the system of a horse. The phlegms arrest it from the blood; the salt arrests it from the stomach and bowels; and the spirits arrest it from the feet and limbs.

I once rode a hired horse 99 miles in two days, returning him at night the second day; and his owner would not have known that he had been foundered if I had not told him, and his founder was one of the deepest kinds.

I once, in a travel of 700 miles, foundered my horse three times, and I do not think that my journey was retarded more than one day by the misfortune, having in all the cases observed and practised the above prescription. I have known a foundered horse turned in at night on green feed; in the morning he would be well, having been purged by the green feed. All founders must be attended to immediately.

Southwestern Farmer.

Agriculture is the nursing mother of the arts.—*Xenophon.*

POUDRETTE.

We feel particularly anxious to call the attention of our farmers and gardeners to this convenient, stimulating and valuable manure. We had our own interest very much excited by the astonishing, and, we *guess*, rather exaggerated accounts we heard of its effects while we were at the North last fall. That it is one of the most powerful fertilizers known, and that it should be at least fairly tested by every farmer, who has an opportunity of obtaining a barrel, we do not hesitate to assert; and this, because the experiment can be made at so small an expense, and if it is all they say of it, it will prove the most important addition that has ever been made to the farmer's resources. That it is ever to supersede stable manure, or that the day will ever come when it will be to the farmer's interest to neglect his farm-yard and compost heap, we consider all humbug and nonsense. But that after the farmer has put out all the dirt, dung and compost that he can rake and scrape, that he may then purchase poudrette for the balance of his land, that would otherwise go unmanured, with a prospect of realizing two or three hundred per cent on the outlay, we are strongly inclined to believe.

All chemists agree in according to this substance the very highest fertilizing properties.—Prof. Johnson, than whom none stands higher in the scientific world, says:

"'*Night soil*' is probably the most valuable, and yet in Europe at least, the most disliked and neglected, of all the solid animal manures. It varies, no doubt, in richness with the food of the inhabitants of each district—chiefly with the quantity of animal food they consume—but when *dry*, no other solid manure, weight for weight, can probably be compared with it in general efficacy. It contains much soluble and saline matter, and as it is made up from the constituents of the food we eat, of course it contains most of those elementary substances, which are necessary to the growth of the plants on which we principally live."

We have heard it estimated that one bushel of poudrette contained at least as much fertilizing power as ten bushels of stable manure, while the facility of putting it out was much more than ten times as great. It has been applied in this country with great success to wheat and corn. Upon potatoes, peas, turnips and other garden vegetables, it is described as producing the most astonishing effect in hastening their maturity and increasing their products. In a letter to the "United States Farmer" Mr. Jos. Tyrell, of New Jersey, states:

"In March last I planted six rows of early peas, four of the rows were manured with poudrette sprinkled liberally over the seed. These came up five or six days before the others, they grew more luxuriant, came in blossom ten days sooner, and yielded much more abundantly than those which had no poudrette. I have tested its merits as a manure for cucumbers and melons, and prefer it to any other for those articles."

Mr. Lemuel Soper, of Long Island, makes the following statement:

"I have used poudrette on corn at the rate of a gill to the hill, which produced as good corn as where I put a shovel full of yard manure in the hill. The worms were not as troublesome where poudrette was used as where other manure was used. I also used it on wheat, at the rate of forty, sixty and seventy bushels to the acre. When I used forty bushels to the acre, I got *as good wheat* as where I used forty wagon-loads of barn-yard manure, and *equally as good* as where I used sixty or seventy bushels of poudrette to the acre.

"I also used it on all kinds of garden vegetables, and never had better success. I consider it *better for corn in the hill than bone*."

Mr. F. W. Blydenburgh says:

"On *grass lands*, in the month of May, it has a *decidedly* beneficial effect as a *top dressing*. I should think twenty bushels to the acre would *double* the crop for one year, but doubt whether it would show much on the second. Mr. Blydenburgh has used it on nearly all the variety of crops raised on Long Island, and with a view of testing its relative value with other manures. He says, 'I applied the article last summer to Indian corn, melons and other vines, and ruta baga. On corn, a gill was put in the hill, against *eight times* the quantity of hog-pen manure, and against *five* times the quantity of fish manure, the latter a compost of 'sting Rales' and earth, prepared the previous autumn, with results much in favor of poudrette for the first six weeks, after which its superiority became less manifest, until the general appearance and crop became so nearly equal that no difference could be perceived. * * * In conclusion, I would say that for the hills of corn, poudrette has no rival, so far as the labor and expense on the one hand, and produce on the other, are to enter into the account. A gill to the hill is better than a larger quantity, unless the first four weeks after planting should prove to be very wet, or unless the ground is low and moist. I have seen a striking instance of the good effects of poudrette on a field of oats, applied by one of my neighbors at the rate of fifteen or twenty bushels to the acre, on land of middling quality. The yield was increased at least 70 per cent."

For the information of those who have already ordered the article, as well as those who may conclude to do so, we copy the following directions for its use, furnished by Mr. D. K. Minor, of New York:

"I recommend the use of 20 to 25 bushels to the acre for corn, on ordinary land. When the ground has been ploughed, and lays in furrows, I would spread by hand, at broadcast, about 14 or 15 bushels to the acre, and then harrow *crosswise* of the furrows, mixing it *thoroughly* with the soil. I would then mark out the rows with an ox chain, drawn on the ground, and drop the corn, and put about *half a gill in the hill*, and cover it up *with* the corn. This would require near 8 bushels, making about 23 bushels per acre,—*or* three-fourths of a gill may be put *in the hill* at planting, and an equal quantity spread on at broadcast, and well worked in at the first or second hoeing—*or*, if not obtained in time for planting, the *whole* may be spread on, and thoroughly worked into the soil at the hoeing. It is undoubtedly most effectual when applied at planting; but still, very important benefit will be obtained from its application when applied at the rate of 14 or 20 bushels to the acre at the first or even *second* hoeing.

"*For wheat*, to be followed by *grass*, I would spread on at the *sowing* from 15 to 20 bushels to the acre, to be harrowed in *with* the seed. This will give it a vigorous growth in the fall, and enable it to stand the winter. I would also spread ten bushels more upon it in the spring, and pass a light harrow and roller over it. When used as a *top dressing* for wheat or grass, without being harrowed in, it should *always* be just previous to a shower.

"It is found to act very favorably on grass seed, *especially on clover*. I have reports from Dutchess and Westchester counties, which say that where poudrette was used on wheat in 1839 and 1840, the grass, *especially the clover*, is much better than where other manure was used in the *same field*, so much so indeed, that it is readily perceived on going into the field.

"For *turnips*, 25 or 30 bushels is a good dressing. If the seed is sowed at broadcast, the poudrette should be applied in the same way and harrowed in with the seed. For *buckwheat*, 10 to 12 bushels; and for *oats*, 15 to 20 bushels, according to the condition of the land, may be used, *always* to be harrowed in with the seed. For *potatoes*, a *gill* to the hill, to be put in with the seed, is sufficient on ordinary land; a larger quantity will be likely to make more *vines* than are useful.

"For *cucumbers*, *melons*, and other garden vegetables, it may be used in small quantities at *planting*, and on melons, cucumbers and squashes, it will be found a *preventive* to the *striped bug* and other insects, if sprinkled over them in small quantity after they are fairly up. ☞I find the same *prejudice* and *dislike*, on *first* acquaintance with it, among *insects* as among *some men*. On applying it to cucumbers and melons, I was amused to see the *yellow bugs*, and other like *fastidious* insects turn their backs upon me, as I have often been to see gentlemen of *delicate* nerves turn up their noses at the *mention* of 'poudrette!' This circumstance, however, may not render this valuable fertilizer of *less* value, any more than the opinion of *gentlemen* of 'delicate nerves' renders the enterprise one of doubtful propriety. I am satisfied from my own experience, that it will be found very valuable on all garden vegetables, not only in producing a rapid growth, but also as a guard against *insects*."

Southern Planter.

POUDRETTE.

In running over the articles in the last number of your valuable paper, I was particularly struck with the one from your correspondent Za. Drummond, Esq.—it made every cord in my heart vibrate, and I felt, for one, than I was ready "to go hand in hand" with him, if not for "twenty-five years," at least to the close of my earthly existence, in attempting to improve that part of the Old Dominion which I call my own. I believe it was General Miller who, during our revolutionary struggle, when asked by his superior officer if he could storm a certain fortification of the British with an inferior force, modestly answered, "I will try, sir"—he made the effort, and history has recorded the result. I have adopted this as my motto—I am determined to "try" what can be done. I remember to have promised you some time ago a short account of my method of preparing manures from human excrements. I will now redeem that promise, hoping that it may be useful to many of your subscribers. First, I collect the stercoraceous matters separately in large vessels or hogsheads, after the urine has become putrid, which will require but two or three days in warm, and ten or fifteen in cold, weather. I then add sulphuric acid to the urine slowly; if the urine is putrid, a powerful effervescence will immediately take place; the acid must be added until effervescence ceases. By this process, the carbonic acid in combination with the ammonia, is disengaged and driven off, and sulphate of ammonia is formed, which has no volability, except at a very high temperature. Thus you secure the ammonia formed by putrefaction, which otherwise would escape. I then add the liquid to the solid excrements, incorporating them well together, until a very thin batter is formed; into this mass I stir in finely pulverized charcoal, according to my judgment, without regard to any precise quantity; this done, I spread the mass upon boards made tight, in the open air—stir frequently until the whole is dry, then pulverize with a spade, and barrel it up for the use of crops.

My drying boards are protected from the weather by a shed open to the south, so as to receive the benefit of the sun. Manure made in this way I call *Poudrette*, and of its value I can speak in the highest terms. When properly made, it is inodorous, and the application to crops easy, and the effect powerful. I made an experiment with it last season upon sugar beet, in comparison with bone dust, bone dust and stable manure mixed, and stable dung alone. The beets manured with poudrette came up quicker, grew faster, and maintained a decided superiority to the last, making the largest and best beets; the quantity of poudrette was only a small train to each drill. I used it also upon corn with entire success. In this experiment I subjected it to a very severe test; I selected a very poor spot, put only one and a half gills to the hill as a top dressing at the time of planting, and the result was truly astonishing, proving it to be beyond all doubt a manure of great strength and power, perhaps surpassing all others *now known*.

It must in all cases be used as a top dressing; such is its strength when planted with seed, the

germ is destroyed, and consequently does not come up.

I shall make about one hundred barrels this season, which I intend to use chiefly on corn the coming spring, from which I anticipate the best results.

When I commenced I intended to say something about what I have been doing in bone dust, dead horses, pigs, dogs, cats, &c., but I am reminded in your editorial what great severity your correspondents may expect at your hands, and as my piece is already much longer than *my "hand,"* I shall close. Sincerely yours,

GEORGE WOODFIN.

Southern Planter.

ROOTS.

From the very flattering manner in which you have introduced me to the readers of the "Southern Planter," I cannot resist the call to furnish you with a statement of the treatment, culture and produce of my carrot patch and field of Swedes.

I am not so vain as to think I can furnish any thing new on the subject, to your readers; but a plain, practical, matter-of-fact account may not be uninteresting to them.

Although the root culture has been gaining favor in this country for several years, still, in my opinion, it has not received that attention it deserves. My soil is a loam, some parts inclining to sand and some to clay, and what is termed here sandy loam and clay loam, and well adapted to the growth of roots, particularly carrots and ruta bagas. I have cultivated roots for my stock for the last ten years, and I have found no crop that pays better for the expense of cultivation; none that abstracts less from the soil, or that leaves it in a better condition for a succeeding crop. I have never failed in procuring a good crop of barley, and after ruta bagas, grass seed always take well. I have been less successful with oats, as the richness of the soil causes a too luxuriant growth of straw, whereby they lodge and do not fill so well.

You may recollect that my carrot patch was near my house; I call it my *accommodation* crop, from its being near by and can be worked at odd times; besides it is the scene of my labor! Do not start, gentlemen, for I assure you I do not belong to the silk-stocking gentry. If you had made your visit in the summer, you might possibly have found me in my "frock-and-trousers" in the very midst of them, and the perspiration profusely rolling off my face in drops as large as peas.

To ensure a good crop of carrots, and it will apply equally well to all crops, it is necessary to have the soil not only rich but well worked and pulverized. As soon as the soil is sufficiently dry in the spring, I plough as deep as possible, and after one or two weeks, I haul on at the rate of sixty cart loads, (equal to thirty wagon loads,) of compost manure, and spread evenly, and harrow it thoroughly, when the plough is again put on and a shallow furrow turned, just sufficient to cover and mix the manure with the soil. It is now suffered to rest until the seed is to be sown, which in this climate will be from the 10th to the 20th of May. Previous to sowing it is thoroughly harrowed, and then thrown into ridges, twenty seven inches apart, which is done by turning two furrows together. A light roller is then passed over, flattening two ridges at every turn, the horse walking between them. This leaves a flat surface of about four inches wide for the drill, which follows and deposites the seed in the centre about half an inch deep; a small roller attached to the drill follows, covering and compressing the earth to the seed, which completes the operation.

As soon as the plants are about an inch high, they are weeded and thinned, which is considered the most tedious operation, which is rendered easy and expeditious by what we term the "push and pull" system. In the first place we run the cultivator, with the wings closed, between the rows, and then by standing in the furrow, with a small narrow hoe, say three inches wide, push one side of the plant and pull the other side into the furrows, which will leave the plants about four or five inches apart, which I conceive to be the proper distance. After the second working, which is merely running the cultivator between them again and cutting up the weeds, the ridges vanish and the soil becomes nearly level.

The advantages of cultivating on ridges are, the soil is warmer and drier, the plants are more easily distinguished, the weeds do not grow as vigorously and are much more speedily removed. The great secret in making good root crops is in thorough cultivation and a generous supply of manure.

You will recollect the carrot I cultivate is the white Belgian variety, which I esteem the most profitable on account of the great produce and the ease with which they are harvested.—Unlike any other variety, from three to four inches of the roots rises above the soil, which affords greater facilities in drawing, which can be done by grasping them with the hand, resembling in that respect the mangel wurtzel.

I gathered them on the 14th of October, which was accomplished in the following manner.—Each man took two rows, pulling and laying the tops all one way in a row. After they were all pulled, the tops were struck off at one blow with a knife made of a piece of an old scythe, and the roots of four rows were thrown into one; the cart followed and the roots were tossed into it with the hand. The crop obtained from the patch, which is about one-third of an acre, was 305 bushels.

It is impossible for me to estimate the expense of this crop, as the labor was done at odd times, in the morning before breakfast, when the main work was at a distance. In comparison with the ruta baga, I judge they cost about one-third more, which would bring them at about nine cents per bushel.

I agree with Mr. Botts in estimating their value. For horses and milch cows, I consider them superior to any other root. Horses become very fond of them, and fed once per day with them, their bowels are kept loose, and the hair becomes glossy, giving them a lively and healthy appearance. Cows eat them greedily and their milk is of the richest color, and the butter of superior quality. They are in such high estimation in this section, that a gentleman in the city paid me twenty-five cents per bushel for a load of them to feed his cow.

From the amount taken from the small piece as above, I am well persuaded that 1000 bushels, every thing favorable, can be grown on an acre.

My method of cultivating the ruta baga is similar in several respects to that of the carrot. They require a lighter soil and delight in a sandy loam, and will bear as much manure as any other crop, not even excepting corn. I have grown good crops on a sod, by turning under forty loads of fresh yard manure. I prefer, however, to have them succeed potatoes, which was the case with the field you saw in October last.

Last spring a compost of yard manure and the refuse of a glue factory, consisting of lime, bones, wool, hair and bits of pelt, was applied, say twenty loads to the acre, carefully spread after the first ploughing, and turned under with a shallow furrow and thoroughly harrowed and mixed with the soil—then throw into ridges 27 inches apart, the tops flattened with the roller, and the seed deposited with the drill, &c. The after culture, with the exception of leaving the plants from nine to ten inches apart in the drills, was the same as that of the carrots.

There is one fact in regard to this crop which I never noticed until last summer. It so happened that a part of this field was not weeded and thinned for some days after the other, and the plants and weeds had attained considerable height before they were worked, and caused about double the labor to finish them. On pulling we found them on this part of the field less in size, necks long and tops large—termed "necky." On reflection, the same has happened before, and I could not account for it. I have also heard others complain of the quality of their seed, that the plants would not bottom, &c. I have seen some of these patches and recollect that they were very close, and there was apparently a great strife between the plants and weeds for the ascendency.

I finished pulling my crop on the first of this month, and they amounted to 2355 bushels, and as near as I can make it out, the expense of cultivation would not vary much from six cents per bushel. We think there was not far from three and a half acres. I feed them to my cattle, sheep and swine; and for feeding calves the first winter, they are invaluable, carrying them thro' in fine condition, and promoting their growth wonderfully.

In storing them I fear the heat more than the frost. I have about 1600 bushels in a cool cellar and 600 in heaps covered with straw and earth, for feeding my ewes in May.

C. N. BEMENT.

Three Hills Farm, December 6, 1842.

Southern Planter.

RUTA BAGA.

In my communication on the culture of the white carrot, I promised to give you my method of cultivating and the product of my field of ruta bagas.

The piece you saw, when at my farm, contained about three and a half acres, and had lain in pasture a number of years; it was carefully turned over in the fall of 1840; and in the spring following, cross-ploughed and harrowed, and laid out in furrows two and a half feet apart, and planted with potatoes. The knolls, which incline more to sand, were manured with horn-shavings and hogs' bristles, one handful to each set. Twelve rows through the middle were manured with salt mackerel, which were spoiled, half a fish to every set. It was an unfavorable season for potatoes, a severe drought in the summer having injured their growth. The rows manured with the salt fish, I noticed, stood the drought much better than any other part of the field; vines large and of a dark healthy color, when the others were brown and shrivelled, and on digging we found them of a large and even size, and of excellect quality, and the yield far better than any other part of the field.

Last winter, I purchased twenty-six two-horse loads of the refuse of a glue factory, consisting of lime, bones, wool, hair and piecess of pelt, some of which had lain for two or three years. To twenty loads of this I added forty loads of yard manure, and had it well mixed. In the spring it was ploughed seven inches deep, and left until the middle of June, when the manure was hauled on and evenly spread, which covered all except about three-quarters of an acre, on which was put six loads of the factory refuse, without any yard manure. The piece was then ploughed and harrowed, thoroughly mixing the soil and manure. It was then thrown into ridges twenty-seven inches apart, the same as for the carrots; tops flattened with the roller, and seed deposited with the drill (Bennett's) on the 18th of June.

On that part of the field where the yard manure was applied, the plants made their appearance on the fourth day after sowing, while on that part where the refuse of the glue factory was put, they showed very few plants until the tenth day, and then they were sickly in appearance, and grew so tardily, that the flea devoured them about as fast as they made their appearance. In fact, we were obliged to transplant to fill up vacancies, on the whole three-quarters of an acre—showing most conclusively the ruta bagas require a quick and active manure to give them an early start to get them out of the way of their greatest enemy, the turnip flea or beetle.

On the 18th of July, the cultivator was run between the rows, and they were thinned with the hoe in the same manner as the carrots, leaving the plants from eight to ten inches apart in the drills. In August, the cultivator was again run through them, and they were howed at in-

teryals when convenient. Nothing more was done to them until we commenced pulling in November. The crop measured 2355 bushels. I will here remark, that when the salt fish was used the year previous, it was strikingly visible at some distance; the tops being of a darker hue, higher and more vigorous, and they continued so through the summer, and on raising we found them thicker and longer in the neck and smaller in the bulb, showing that salt will increase the top at the expense of the bottom.

The greater part of the crop was stowed in a cellar—the remainder was put in heaps in the field, for feeding my ews when they have lambs in the spring. The heaps are made in the following manner, which I never knew to fail when they were properly attended to. A trench six feet wide, of any length required, and one foot deep, is dug in a dry situation, generally on a knoll; the roots are thrown into this trench and piled up in the form of a roof. A coat of straight straw of from eight to ten inches in thickness, is put on in such a position as to conduct the water off, if any should reach it. Earth is now thrown on by digging a trench around the heap, beginning at the bottom and going around until the whole is covered. The earth will press the straw, which prevents its running through to the roots. A coat of ten to twelve inches in this climate is sufficient for our common winters. The trench will prevent the water from getting into the heap. There is more danger of getting the covering too thick than too thin. I have suffered more from heat than frost. After the earth is all put on, it should be carefully clapped down with the spade, to make it more effectually shed the rains. After a few days I take a crowbar and thrust it in the top along the ridge down into the heap, no matter if it breaks some of the roots, and open holes about three feet apart, to let the gas or vapor off, which is generated by a partial fermentation. A flat stone, raised a little on one edge, set up an inch or two, or a wisp of straw may be put into the holes to prevent the rain from getting in, which completes the work for the winter.

With me the ruta baga is a valuable crop.—They afford the greatest quantity of food for my stock, from an acre, while they seem to exhaust the land less and leave it in the best possible condition for a succeeding crop. It is too rich for oats, but well calculated for barley, and clover seed always "takes well," sown with it. I feed them to my cattle, sheep, hogs (boiled,) and occasionally to my horses. For calves, the first winter, they are very valuable, keeping their bowels open and loose; they will grow and thrive without running too much to fat; their coats smooth and glossy, and continue to grow through the winter, and "go to grass" in fine condition, by which they gain at least six months in their growth over those wintered in the common and ordinary way. Heifers wintered in the above manner will answer to come in at two years old. I have one now in my yard that will not be two years old until January next; she had a calf last March, and has been milked ever since, and I cannot perceive that her growth has been retarded in consequence, and she is now as large as common three year olds.

C. N. Bement.
Southern Planter.

Soap Suds.—There is no better manure than dirty soap suds; and there is not a farm house in the country, but what produces enough of it in the course of a year, to manure a garden, two or three times over. Dirty suds, after washing, is almost universally thrown into the nearest gutter to be washed away and wasted. Would it not be an improvement, and show a laudable economy in the good woman of the farm house, to have it conveyed to the garden to enrich the ground, and make the vegetables grow more luxuriantly? The potash, the grease and the dirt, all of which are component parts of soap suds, are first rate manures, and should always be applied to make plants grow, and especially when hard times are loudly complained of and sound economy is the order of the day.

IMPROVEMENT OF INDIAN CORN.

I have several times, within the last fourteen years, called the attention of the agricultural public to the subject of improving Indian corn, without, so far as I am informed, having induced a single experiment to be made. This shall not deter me from making another effort, however. At the present time there is not a single variety of corn that has not some objectionable quality, and not one bad quality that may not easily be got rid of. One variety is excellent in every quality except its lateness in ripening; another is early enough, but its grain is too small and its cob too large for profit; another is too flinty, another too chaffy, &c. Every corn planter will agree with me that it is important to have a variety of corn that will ripen early, that the ground may be occupied by a crop of wheat or other winter crop, and that the corn may be housed, (and marketed, if desirable,) early in the season. But I need not dwell on the qualities that are desirable, as they will readily suggest themselves. I therefore proceed to state, that any farmer may make any or all of the following changes in his corn. If it be too late in ripening, but possesses every other desirable quality, he can readily make it *early;* if it be sufficiently early, but objectionable in other qualities, he can readily improve those qualities. And all this too by a means just as simple as that of any other agricultural process.

Corn has the male and female organs in different flowers on the same plant. It is called by botanists a *monœcious* plant on this account.—The male flower is on the top of the plant, and is commonly called the *tassel;* the female flower is on the ear, and is called the silk. If the plant be deprived of either of these organs, no grain can be formed. Suppose we deprive a plant of all the silk as soon as it appears; we shall find the cob will grow and present all the indications of germs of grain, but there will be no grain; and exactly the same thing will happen if we destroy the tassel as soon as it appears, without touching the silk. Each thread of the silk leads to a particular grain on the cob, so that there are just as many threads of silk as there will be grains of corn on the cob when ripe. The cob and the germs of grain will be formed whether the male influence be exerted or not. The male influence, therefore, will not change the size of the cob, the size or shape of the grain, or the number of grains on the ear; but it does affect the color of the grain, and its quality as to flintiness, and as to its season of ripening.

Now let us suppose an experiment to illustrate the facts just stated. I have a kind of corn that suits me exactly in every quality except its season of ripening, and I wish to obviate that difficulty. Well, I plant a piece of ground, say a quarter or half an acre, with it at the usual time, taking care to leave each alternate hill vacant. Say this corn ripens on the 1st of October. I want it to ripen on the 15th of August. I then look for some early variety that ripens on the 15th of August, say the *Tuscarora,* whose grain is light and chaffy, but which is not otherwise objectionable. I plant this in the alternate vacant hills six weeks or two months after I planted the first parcel. It will of course happen that both kinds will put forth tassels and silk about the same time. Now I wish to transfer the grain of my first planting to the cob of the second; therefore I carefully watch the appearance of tassels on the Tuscarora, and cut them out as soon as they appear, not allowing them to produce their pollen, and thus allowing the silk of the Tuscarora to be affected by the pollen from the neighboring late kind. At the harvest I save only the ears of the Tuscarora, and, as there are plenty of them, I save only the earliest and best formed. The grain on them will be found to be a perfect mixture of the two kinds. Next spring I plant the product, and at harvest I find about an equal quantity of grains on each ear of each of the parent kinds, in appearance. I select these I prefer, and plant them on the third year, when I shall have secured the improvement I desired.

In this way the grain may be transferred from a red cob to a white cob, from a large cob to a small cob, &c. The grain of the large southern corn may thus be placed upon the cob of the dwarf northern corn, and indeed any other improvement or change desirable may be effected. True, it requires three years to effect the object; but what of that? Nothing is lost by the experiment except an hour or two of time, and a little careful watching. Not a fourth as much time or attention is required as is bestowed on the production of improved animals.

I could enlarge upon the importance of this subject, and fill a large space in your excellent Register with the discussion, but it surely cannot be necessary. There is not a corn planter in the union that has not every year had cause to lament some bad quality in his corn; and I take upon myself to say there is not a single bad quality that may not easily be removed by the above described process. I hope, therefore, that some one will make the experiment and publish the result for the benefit of the agricultural community.

Gideon B. Smith.
Farmers' Register.

CORN.

"I have noticed an error in the culture of plants and trees, wherever I have been, and I know no better plan to illustrate it than in showing the effect of the error on corn. In the culture of corn, it is usual to work the crop till the tassel is about to make its appearance; this is an error. Whenever the lateral roots of a plant are injured, moved or disturbed, when the stalk that is to produce the seed is matured or about maturing, or whenever those roots are covered to a greater depth at this stage of growth than nature intended, it will produce early maturity and decay; and the yield will be just in proportion to the extent of the error. If you will take the pains to destroy the lateral roots of a stalk of corn after its having made the last joint on the stock, you will find that it will produce no corn; and if you will displace their situation at this time by hilling, you will get a less quantity of seed than if left alone. If the lateral roots of a stalk of clover are cut off when the seed stock is forming, there will be no seed; and just so with other plants and trees; and the working of them at this stage cannot be attempted without injury. Yet, strange to say, it is almost invariably done. I have never suffered my corn to be worked after one-third of the height of the stalk was attained. I plant close enough to have the corn to shade the ground at this height, so as to prevent the growth of weeds after this last working. I plant two and a half feet square, and leave two stalks in the hill, and I have never missed having as much corn per acre and as large ears as my neighbors; and much more than some of them. I never planted a crop of corn that I had not some kind neighbor or friend to tell me that I would have neither corn nor fodder. Last spring a cropper upon my neighbor's farm planted thirty-five or forty acres in corn, and I about ten acres; our fields adjoining. He planted his corn four feet square, and left three or four stalks in the hill, and worked his crop till it was ready to shoot into tassels. I quit working mine when about two and a half feet high. His field was full of weeds and grass. Mine remained clear of both weeds and grass. When our corn was husked and housed, he told me that I had from my ten acres nearly fifty bushels of corn more than he had from his thirty-five or forty acres, notwithstanding he told me, in its early growth, that I would have no corn. Part of his ground was quite as good as mine.

"A similar and worse effect is produced in the hilling or working of plants in the latter stage of their growth, than takes place in plants and trees when deep planted. A disease is produced that hurries the plant on to early maturity by impeding the proper nourishment, by disturbing or placing the roots below where nature intended they should range for food, as well as depriving the vessels of the stalks thus covered from performing their functions. The stalks

being established, it is folly for man to attempt to do that which God alone can do. Deep planting and ploughing the peach orchard after the trees have maintained sufficient maturity to produce fruit, is, if not wholly, the principal cause of the disease called the yellows. By ploughing, the lateral roots are either cut, disturbed, or forced to seek food apart from where nature intended, and thus operates as a hill placed around plants, and brings the tree to early decay.

"To conclude this subject for the present, I will say, work your plants and trees while young, so as to form good stalks, and then trust to that all-wise Disposer of events to perfect them.

"I think I noticed a remark in your paper, of the roots of the watermelon being attacked by small animalculæ. Some salt added to the hills before planting will remedy that evil and give you better fruit; and salt and satpetre sown in the peach orchard, (particularly where the orchard is worked with the plough,) will assist in preventing like depredations to the roots of the peach tree.

"If you think that this hasty notice will be of any service, you are at liberty to dispose of it as you think best, and be assured that I seek neither money nor thanks for performing duties we owe to one another. LITTLETON PHYSICK."

Cultivator.

INDIAN CORN AND OLD FIELD PINES.

I have been a subscriber to your paper ever since it has been published, and I have noticed that nearly all your correspondents upon the subject of Indian corn agree that the rows should be four and a half or five feet distant. This is no doubt the proper distance for all the corn east of the Blue Ridge, but I once happened to be present, in the southwestern part of Virginia, at corn planting time, and was surprised to observe the farmers laying off their rows from three feet to three and a half wide. I told them that they would make no corn, and insisted that the rows should be wider. One gentleman told me to lay off a few rows in the old Virginia style, and I, being accustomed to the plough handles, laid hold and run off a few furrows through the centre of the field, four and a half feet apart. In the succeeding August, I visited the same field, and, to my utter astonishment, the rows I had lain off were destitute of grain, and the fodder burnt entirely up, whilst the narrow rows were excellent and the fodder green to the ground. So I concluded that the proper width of rows depends upon the nature of the soil. I noticed that the lands in Western Virginia dried much sooner after heavy rains than they did east of the Blue Ridge; this is the case in all limestone countries, where the corn must be planted thicker, for the purpose of shading the ground, and retaining the moisture in summer.

I congratulate neighbor Drummond on his converson to early planting. I have tried the experiment myself, and find that corn planted early will not grow as tall, but will yield more grain, and that of better quality, for it will weigh more to the bushel than the late planting.

A writer on "Forest Trees," in your August number, 1842, observes that old field pine is "of little value." Now I consider a grove of such pines exceedingly valuable for garden posts, or posts of any kind; if properly prepared, they will last as long as locust or any other timber.—My mode of treatment is as follows: I take a drawing knife and draw off the bark as the tree stands, as high up as I want to use it: in this situation the tree, which will not die, remains a twelvemonth, when, in consequence of the sun having drawn the rosin to the surface, it will have become a solid bulk of lightwood and will be ready for use.

Your obedient servant,

J. H. FUQUA.

Southern Planter.

Rubbing the limbs of the plumb with soft soap, to prevent the black canker, has been tried with success.

ON THE VALUE OF LIME.

It is discouraging to preach to a deaf congregation; or, what is practically the same thing, to address those who are resolved not to abandon long established practice and usage. Yet social duty may require us to give our fellow man the benefit of our experience and practice, and leave him to pursue his own may, be that what it may. After more than forty years of practice and industry devoted to agriculture, and almost sinking under hopes deferred, I commenced the free use of lime. In wet land, except for grass, lime was almost a failure; but upon dry land it appeared to wake up the sleeping powers of the earth, and run vegetation into a kind of unregulated madness. Mother Earth appeared to strut in pride for the richness and abundance of her productions. That great man, Moses of the Jews, you will remember, was forty years in the wastes and deserts of the earth, and, except the performance of his duty, his only gratification was a few bunches of grapes. Mine would seem to be a fate more gratifying to human nature, for I am left to wade through grass and corn, and flatter myself that I am at least upon good terms with dear old Mother Earth, who sooner or later must take me to her lap, and hush me to such repose as my deeds in the flesh may deserve.

If I were to fill one hundred pages upon this subject, the whole would resolve itself into this:—make your land dry, plough it well, give it 100 to 200 bushels of lime, or more if necessary; then all the vegetable matter or rich earth you can find—take a crop and lay it down to grass—not less than two gallons of clover seed to the acre, and as much of timothy as you please.—Vegetables, like carnivorous animals, eat or live upon each other—the more you give the earth the greater will be the following crop. No animal can be grown without food, and the same is the law of grains and vegetables. Our hot midday sun is taken up by the corn plant upon good limed land until it is of a deep black green; there is no wilting or twisting in its blades; the long silks show that all is well, and that there is no shuffling in the ranks. But to bring this matter into dollars and cents: I have no hesitation in saying that if I had been in the use of lime for forty years, it would have been good for one hundred thousand dollars upon my 500 acres of fallowed land.

LIME.

Farmers' Register.

HOW TO MAKE GOOD COFFEE.

The question is often asked, why it is, that good coffee cannot be produced in this country? The reason is simply this: coffee is spoiled in the burning, and sufficient care is not taken in preparing it for the table. To make coffee equal to the French is very simple, and very easy, and for the benefit of all good housewives, and all lovers of good coffee, we will state the manner in which it should be done. First, procure the best coffee possible. See that your cook does not *burn* it, but roast it to the color of a golden brown, and never allow it to remain in its burnt or roasted state for more than three days, as after that time it will lose its strength. Secondly, in *lieu* of the ancient method of *boiling* your coffee for an hour or more over a hot fire, and then being obliged to settle it with such rarities as *fish-skins, egg-shells* and the like, procure a *biggen*, as it is termed and make a distillation or decoction by putting the coffee in the apartment in which the strainer is, and turning thereon *boiling hot water*. Take care that the nose of the coffee-pot has a stopper to prevent the steam from escaping, and cover the top of your *biggen* immediately after having turned the water upon the coffee; as it is a most important requisite to have the steam confined. Judgement is also to be used, as to the amount of coffee required, and also to the quantity of water to be used. The best coffee may be spoiled by too much water applied to it. The coffee should be made very strong; and, if strong enough, its color will be quite black. Lastly, having made your coffee of great strength, do not use *hot water* to dilute it, but, in lieu thereof, take boiling hot milk, and weaken the coffee to your taste. By following these directions you will have as fine a cup of coffee as can be made in any country.

The time required for making coffee in this manner, is but a few minutes, the coffee being made as fast as the liquid issues through the strainer.—*Daily Times.*

SALT.—I will give your readers some account of the benefit of salt, as it is becoming an important article among farmers. I observed two years ago in the town of Stow, an acre of land set with fruit trees of different kinds, and I took notice that one half of the trees were one third larger than the others; and I also observed that where the trees were largest the land was moist, while the other part was dry. That half of the acre that was moist, and on which the trees were largest, was sown over with two and a half bushels of salt four years before; the other part was dressed with two cords of manure. The part manured with salt appeared as though there had just been a shower upon it; while the other part was dry and dusty. On the part to which salt was applied, the trees were smoth and thrifty; on the other part, the trees were rough and backward. Salt is good to destroy insects that are injurious to fruit. By mixing it with peat mud and laying it around fruit trees, early in the spring, it will destroy the insects that often injure the plum, the apple and peach tree.

GEORGE W. MAYNARD.

Boston Cultivator.

NUTRITIVE QUALITIES OF CHARCOAL.

Though the importance of mixing charcoal with the food of animals, particularly that of swine, has been generally acknowledged, and its benefits extensively tested, still it has been supposed that it only acted as a corrective to the acid tendency of food, and facilitated fattening by improving the health of the animal. Some experiments are, however, on record, which would seem to show that charcoal acts a more important part in the matter than has been usually assigned to it.

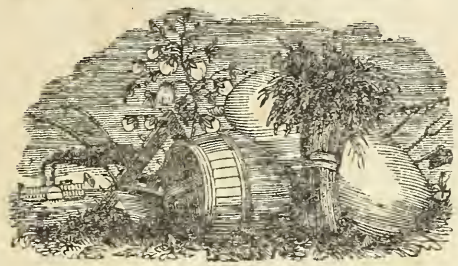
In 1793, a family being driven from New York by the fever, were absent six or eight weeks before it was deemed prudent to return. A number of fowls confined in a loft to the workshop of the house, were forgotten at the time of leaving, and it was known that there was nothing provided for their subsistence, it was expected on the return that they would be found starved to death. To the astonishment of all, the fowls were found alive and fat, though there was nothing upon which they could have fed, except a quantity of charcoal and shavings, water being supplied from the grindstone trough.

These facts coming to the knowledge of a gentleman in New York, as we learn from the Recorder, he instituted the following experiment. He placed a turkey in a box or enclosure, four feet long, two feet wide, and three feet high, excluded light as much as could be done, and allowed a free circulation of air, and fed the turkey with soft, brick, broken fine, pounded charcoal, and six grains of corn per day. The box was kept locked. At the end of a month, the turkey was killed in the presence of several gentlemen, was large and heavy, and on being opened was found filled with fat. Nothing, on dissection, was found in the gizzard and entrails but charcoal and brick. Last winter the experiment was repeated, and with the same success.

Several years since, in fitting out one of the Liverpool traders at New York, a pig on board was missing, and was supposed to have been lost. The cargo was taken on board, stowed, and the vessel sailed. It was now discovered that the pig was alive in the coal hole, but as he could not be got at readily, it was concluded to leave him to his fate. He remained in this retreat until the passage was made, when his pigship was found to be not only alive and well, but materially improved in condition, though there was nothing, coal excepted, he could have swallowed.

When it is remembered that wood, sugar and

several other substances, some of which are most nutritive, are compounded of nearly the same original elements, it would seem possible, by animal chemistry, to convert them to saving life; though all experiments with wood or charcoal failed. The German chemists have converted wood into very palatable bread, by roasting and pulverizing; but calcination, it has been supposed, would destroy whatever powers of nutrition wood might originally contain. The chemical action of vegetables seems to produce the least effect on coal, and not the least particle of it has ever been found in the structure of vegetables, though mixed with the earth and water in which plants were growing, in the form of the most impalpable powder. Whether animal chemistry is able to do what vegetable organization cannot, remains to be seen; though if there is no mistake in the statements alluded to, it would seem probable that this intractable substance is, in some way, made subservient to the nutrition of animals.—*Genesee Farmer.*



WEDNESDAY, MARCH 29, 1843.

POUDRETTE.

The attention which this manure is exciting in every section of the country where it has been used to any extent, has induced us to lay before our readers, in this number, several articles in relation to it, to which we invite their attention. As yet it has been used to a very limited extent at the South, but it is generally regarded such a valuable fertilizer, that the day is not far distant, we think, when its use will be very common.—We shall, therefore, with a view to the promotion of its preparation and application by our farmers, continue to lay before them, all such facts as may come within our knowledge relative to its preparation, or the advantages to be derived from its use; and if, in the mean time, any of them shall have, upon a fair trial, tested its merits, we shall feel grateful for the result of their experiments.

CORNSTALK SUGAR.

The interest which this subject seems to be exciting throughout the country, and our desire to afford our readers all the information we have been able to obtain, have induced us to devote much of the space of the present number to its elucidation, for which we are indebted to the very able report made to Congress by Mr. Ellsworth, the Commissioner of the Patent Office, and to the "*Southern Planter*," from which we obtain the directions of Dr. Naudain. From the facts already presented, we entertain no doubt that the production of sugar from cornstalks may be pursued profitably, and we trust that some of our enterprising planters will satisfactorily test its practicability, and give to the public the result of their experiments.

The work is foolishly executed by *many*, which might be accomplished by a few.

"BOOK FARMING."

The prejudice existing, particularly in sections of the country where little improvement has been made in the science of agriculture, against what is usually denominated "*book farming*," is but too common, and is one of the greatest obstacles to the introduction of an improved system of culture. This prejudice is very general at the South, where the universal practice has been to cut down and exhaust lands, without any regard to improving the soil, or any effort to increase its production by that enlightened system of culture which the science of agriculture teaches. Aware of the existence of this feeling, and the great difficulty of effecting an innovation upon a system so long established among our planters, we entered upon the duties of publishing an agricultural journal, not without a proper estimate of the barriers that would interpose. Happily, however, for the success of the experiment, the exhausted state of a large portion of the lands, and the poor reward their culture affords to the laborer, are likely to contribute as much, if not more, to the accomplishment of the great revolution we have so much desired, than any essays, however forcible or conclusive, that we could hope to present for the consideration of the planter: nevertheless we have deemed the following remarks of the editor of the "FARMERS' REGISTER," in which he enforces so ably and happily the benefits that science is daily contributing to the advancement and improvement of agriculture, so appropriate, and so well adapted to this meridian, that we could not deny ourself the pleasure to give them a place, and invite the careful consideration of the reader.

"All good farming is the result of science applied to the practice of the agricultural art; and of late years, the advantages which the latter has received from the former have been unexampled. The union of the two, in just proportions, makes the perfect farmer; it calls into action the energies of the mind; it leads to enlightened experiment and investigation; and when men's minds are brought into the exercise of their powers, advancement in any profession is the natural consequence. There is no art or profession that requires mental exertion more than that of the farmer; and the ridicule which has been bestowed upon what is termed book-farming, is becoming now, in a great measure, obsolete. Every experiment which has been made in agriculture, unless accidental, has been effected by experiment, by inquiry, by investigation. The soil is the material on which we all have to work; and in order to render this material productive, certain agents are to be employed. The application of these agents may vary according to circumstances, but the leading principles are the same in all countries. Let the intelligent cultivator cast his eyes around him, and he will perceive how much he is indebted to others for the success which crowns his labors. His implements are constructed in reference to correct mechanical principles; his manures are preserved and applied in conformity to known laws; every mineral ingredient which he combines with the soil, has been analyzed, and its virtues tested; and every just principle which governs him in his operations has been established by long and laborious investigation. With all the aids, however, which agriculture has derived from science, the practical part is still, with comparatively few exceptions, in a very rude state. Improvement extend at a very gradual pace, even with those means of diffusing information which the press offers to all. Witness the slow progress which has attended the use of marl in the south, which, but for the unceasing exertions of one individual, would even at this time be but little known; and which in fact continues to be unknown beyond the limits of his own influence. Lime also, a similar and no less powerful agent in the improvement of soils, has been scarcely used in the south, though the means of obtaining it are at hand in numerous sections of the country.

It is to elevate this depressed state of agriculture; to make the knowledge of one the common property of all; to excite a state of activity in the public mind, and to improve the condition of the agricultural classes, that renders the necessity of agricultural periodicals indispensable. It is very true, there may be much in such journals which may not be immediately available to the cultivator. But even then, their general influences and tendencies are beneficial. He is enabled to keep pace with the improvements of his profession; his mind is gradually directed to a higher standard than that to which he has been accustomed; he collects a general fund of knowledge, which will enable him, under propitious circumstances, to conduct his operations intelligently and successfully. He who is now satisfied to move along in the way his forefathers trod; to exhaust the soil without returning any thing which has been extracted from it; to dispense with the light which has been shed on his path by other minds, and to make no effort to enlighten others in return, is living for himself alone, and will leave no works to follow after him. Agricultural, as well as all other information, is now purchased at a cheap rate; cheap; compared with the benefits to be derived from it. Undoubtedly a man may burthen his mind with that which is purely speculative, as indeed he may reject every thing but what he has been wont to practice; but these are extremes, and the just medium lies between. It is, as we have said, the union of science and practice, the application of mind to the objects of daily pursuit, that makes the best farmers in our country. But for this union, what would be the condition of those farmers who are now most successful? What we learned from our fathers, was to impoverish the soil by severe cropping. They knew nothing of plaster and lime and marl; they paid little or no attention to grasses and manures; but drew every thing from the earth a kind soil would yield, without repairing the exhaustion which it suffered. It is obvious that we can no longer thrive on the same fields without great improvement in our husbandry. It is our manifest duty then to endeavor to restore what has been lost, or else it may hereafter be justly said of us, that we have eaten sour grapes, and our children's teeth are set on edge.

"The only effectual means that we are aware of, calculated to diffuse the information of which the farming community stands in need, are, legislative action in some form or other; agricultural schools, agricultural associations, constituted on correct principles, and agricultural journals. Legislative action, for any efficient purpose, appears to be out of the question. Our legislative bodies are too intent on politics, and politics is a subject of too absorbing a nature, to permit any thing not connected with it to claim the attention it deserves. Even the education of our youth, notwithstanding conventions have assembled, and numerous memorials have been presented to the legislature, and notwithstanding every man is convinced that the present system is productive of no positive benefit, and ought to be superseded by a better; even this great subject is almost utterly neglected, so far as legislative action is concerned. Agricultural schools would be an admirable means of doing good; but as long as their establishment depends on individual exertion, it is in vain to expect to see them in operation. Nothing available then remains but agricultural societies and periodicals.

"Of agricultural societies, we have elsewhere in this number of the Farmers' Register expressed our views. They constitute a powerful

agent by exciting the interest of the community and creating a spirit of emulation. But neither by them nor any other agent can extensive good be accomplished without the aid of the press. It is this which finds, or should find, its way into every man's house, and publishes to all whatever is interesting or useful."

For the Southern Cultivator.

HOME BEET SEED.

Mr. Editor—Many are of opinion that beets degenerate, and good seed cannot be raised at the South. This is a mistaken idea, and such is doubt it, let them try the following plan.—Have the ground well prepared, which is very important with all seed; plant at the distance of twenty or twenty-four inches in the drill, and thin to about six inches, keeping the ground loose by cultivation, and with a favorable season you will make fine beets. Then if you wish to make your own seed in hard times like these, and save your sevenpences, select one or two of your best beets, let them remain in the ground, drawing a little dirt around them so they be somewhat protected through the winter. In the spring remove this hill, and they will go to seed and do to plant the next spring. But if you wish still better seed, such as you buy in the stores, let the same beet remain in the ground and attend as before, and the second crop of seed will be as good or better than those usually kept in the seed stores. No mistake.

A Gardener.

Green County, Ga.

AGRICULTURAL SOCIETIES.

Within a few years, numerous agricultural societies have been formed in Virginia and the neighboring States. This fact clearly indicates that the spirit of improvement is progressing; for men seldom combine together, except on important occasions, and to advance objects which they deem to be nearly allied with the welfare and prosperity of the community. Agricultural addresses are also becoming more and more frequent, almost every society requiring the delivery of one from its presiding officer, at its annual meeting. Many of these addresses have been distinguished by great ability, and deserve to be diligently studied. They breathe the spirit of philosophical inquiry; record the progressive improvements which have been made in agricultural science; detail improved practices and interesting and valuable experiments; and thereby spread before the people a rich store of information and instruction, calculated to lead to beneficial results.

We would be very far from detracting from the merits of these various societies, as at present organized. They have done much good, and their influence will continue to be extensively felt. For the most part, however, we regard them as requiring one modification to render them eminently and permanently useful. The offer of premiums, it is true, excites emulation amongst the several candidates for distinction. A patch of corn, or wheat, or of roots, is cultivated with the utmost care, and a great product is obtained—ten times as much perhaps as under ordinary culture. Animals are fed and pampered for exhibition; and specimens of domestic manufacture, showing great toil and ingenuity, are displayed to admiring crowds. This is all highly commendable, and highly interesting.—These exhibitions, however, should rather be considered as the *ornamental* part of the institutions, under whose auspices they are gotten up. We would also recommend a *working* department. An example has been set by the agricultural society of Prince George county, which we consider to be worthy of all imitation. It is made the duty, by its constitution, of every member to institute one or more experiments; to conduct them with care; and at stated periods to report the results, whether favorable or otherwise. This plan opens the whole field of action. Farmers disagree, more or less, concerning almost every operation. Even the cultivation of our universal crop, namely, Indian corn, is the subject of great contrariety of opinion; some think it best to lay it by at an early stage, others contending for late working; some also being in favor of shallow culture, without disturbing the roots, and others of deep culture and tearing the roots to pieces. The cotton plant too, the great staple of the south, liable as it is to so many casualties and diseases, offers a fit subject of investigation for the combined action of societies. Whether a greatly increased production would add much to the net incomes of the planters is perhaps questionable; but improvements in the mode of culture, and the discovery of some protection of the plant against blight and other diseases, whereby a certain product might be attainable, would, at any rate, leave a considerable amount of labor to be directed to other objects. Such improvement and consequent increased production has indeed been already claimed by a planter in Alabama, who asserts that the crop is capable of being made to yield ten fold the usual average, without materially adding to the expense of culture. And in regard to wheat, which is the main stay of farmers of the middle States, it has become so uncertain of late years, that it strongly invites to a course of judicious experiments. Without doubt, the most formidable evil to which it is liable is the rust. Farmers individually, as well as societies collectively, should use every exertion in order to discover some means of guarding against its ravages. That these means are within the reach of those who diligently and intelligently seek after them, cannot be reasonably doubted. Our climate has experienced no essential modification; seed time and harvest remain the same; but the constitution of our soils may have undergone some material change under a long course of culture. The remedy therefore that would seem at least in part, to be indicated, is to restore to their constitution those ingredients which are best adapted to nourish and sustain the grain.

So also of other crops, from the greatest to the least. It is to enable cultivators to attain some uniformity in their managememt; to collect information on numerous unsettled points; to test the value of new varieties of plants; to ascertain the best mode of making, preserving and applying manures; in short, to throw light upon every thing, and every operation pertaining to agricultural and rural economy—that such a course of experimenting recommends itself to the practical farmer. And not the least beneficial effect which such a practice would produce would be its tendency to call the *mind* into action, and to induce habits of observation and inquiry.—*Farmers' Register.*

FARMING IMPLEMENTS.

The remark we have somewhere met with, and it is very probably true, that the arts and sciences have made greater advances within the last half century, than in the eighteen centuries preceding. Among other improvements those which have been made in the implements of husbandry are very great, and they are still in rapid progress. There is scarcely an implement used by the farmer forty years ago, that is not now more or less improved in its model and construction, and a great many new and almost invaluable implements have been added. These improvements not only abridge manual labor to a highly important extent, but they enable the farmer to do his work better. A number of examples in point might be given, but we need only mention the improved plough and harrow, the cotton gin, &c. It is manifest that the community of farmers in which improved agricultural implements are introduced and employed, enjoys decided advantages over that in which the old, unwieldy, inconvenient implements are still made use of. The one is supplied with a certain ready force and a skill in mere machinery, which the other must supply (if supplied at all) with increased wear and waste of human sinews. There is perhaps nothing, therefore, so well calculated to promote the agricultural prosperity and increase the agricultural wealth of a country, as the introduction of improved implements of husbandry.

We would respectfully suggest to our Agricultural societies, generally, to give something more of their attention to this subject. Premiums are not so frequently offered as we should be pleased to see, for the best ploughs, the best harrows, clover machines, hemp knives, corn crushers, &c. In the northern States, this branch of improvement has not been overlooked, but in some of the New England States, great emulation has been excited in the way of agricultural machines by the liberal premiums of Societies, and the patriotic energies of individual agriculturists. The consequence is, a very decided improvement in all farmers' tools, and none more than the plough, with which regular tests are made in ploughing matches, superintended by society organizations.

Dairy Secret.—Have ready two pans in boiling water, and on the milk's coming to the dairy, take the hot pans out of the water, put the milk into one of them, and cover it with the other.—This will occasion great augmentation in the thickness and quality of the cream.—*Al. Cult.*

AUGUSTA MARKET.

Tuesday P. M., March 28.

Cotton.—The market, since our report of Tuesday last, remained in a very quiet state till after the arrival, on Saturday, of the news per the Columbia, at Boston, bringing Liverpool dates to the 4th instant, showing a farther decline of ⅛d. in that market; since which there has been some more activity in our market, and sales have been made at ⅛ to ¼ cent decline.—We quote 3½ to 6 cents as extremes—principal sales 3¾ to 5¼ cents.

Exchange.—The rates for Exchange are without change, being at par on all points north and east of us. Central money 25 @ 30 ℔ cent discount. Alabama notes 20 @ 25 ℔ cent discount. Other depreciated notes are difficult of sale at any price.

CONTENTS OF THIS NUMBER.

	PAGE.
Cornstalk Sugar	25
Cure for Foundered Horse	26
Poudrette	27
Roots; Ruta Baga	28
Soap Suds for Manure; Improvement of Indian Corn; Corn	29
Indian Corn and Old Field Pines; Value of Lime; to make Good Coffee; Salt for Trees; Nutritive Qualities of Charcoal	30
Editorials	31
Home Beet Seed; Agricultural Societies; Agricultural Implements; Dairy Secret; Augusta Market	32

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VOL. I. AUGUSTA, GA., APRIL 5, 1843. No. 5.

EXTRACTS FROM THE ADDRESS OF H. COLMAN.

DELIVERED BEFORE THE AGRICULTURAL SOCIETY OF MONROE COUNTY, NEW YORK.

The improvement of agriculture may be said to comprise two objects; first, the improvement of the art of cultivation, and second, the improvement of the condition and character of the cultivators. The improvement of the former is a small matter compared with that of the latter; the improvement of the latter, understood in its best sense, must essentially aid the improvement of the former. * * * *

1. If we apply this test to our present husbandry, we shall be compelled to acknowledge that it is far from having reached the perfection of the art. If we look first at the amount of products, even in this favored region of western New York, the average yield falls far below the possible yield; and by the possible yield, I mean not a mere theoretical or speculative production, but that which has actually been accomplished. Of wheat, some of the most intelligent farmers state that the average yield does not exceed, and this in the most favored districts, twenty bushels to the acre. Now, I have known thirty bushels to be taken on large fields, forty bushels, fifty bushels, and upon one large tract sixty-four bushels per acre. I speak now of home production, and not of foreign countries. In this matter, likewise, there is little reason to question these statements, as the wheat crop is easily, and almost always measured with exactness, in the half-bushel or by weight; but reports of very large crops of Indian corn, are always distrusted by the sceptical, on the ground that the corn may have been measured in the ear, or only a portion of the field may have been measured, and the rest made matter of inference; or no allowance has been made for shrinkage. In respect, however, to Indian corn, making all the abatements for error that the incredulous may require, it will appear that such yields have been obtained as should make the farmers, who are satisfied with the meager crops usually obtained, at least open their eyes, if in truth such men have any eyes to open. I have been exceedingly surprised, when informed by farmers in western New York, whose good judgment and intelligence cannot be distrusted, that the average yield of Indian corn does not exceed 25 bushels to the acre. Now fifty bushels are not an extraordinary crop. I have known seventy-five bushels per acre to be the ordinary yield of one farmer, whose cultivation was extensive. I have had authentic information of the crops of Indian corn of one farmer, having for years exceeded one hundred bushels per acre, shelled and measured accurately in the half-bushel, in the spring. I have known, upon the most undoubted testimony, one hundred and twenty-eight and one hundred and thirty-two bushels per acre, produced in localities which seemed most inauspicious.

In respect to grass, the crop of hay does not probably average more than one and a half ton per acre. Now I have known many crops of three tons per acre on extensive fields; and in one case I knew more than twenty-nine tons to be taken in the same year in two cuttings, upon six acres of land. In respect to potatoes, the yield is probably not more than two hundred bushels per acre. I have produced crops of more than four hundred and eighty bushels, and have known repeatedly seven hundred bushels per acre, and in one instance, at the rate of more than twelve hundred bushels per acre.

I might instance other crops; but it is sufficient to have referred to these, to show that our husbandry in general, in respect to its productiveness, is far inferior to what it may be. In many cases our soil is not inferior to any which the sun shines upon. There is in our climate no hindrance to the highest measure of production. The large crops to which I refer, are the result of skilful and superior cultivation. They do not come by chance. They show what skill and labor can effect. It will be said that they involve an expensive cultivation, but in every case within my knowledge, they have rendered an ample return for all the labor and expense incurred. An observing farmer will perceive that in most cases a few extra bushels in the yield constitute all the profit of a crop. Thirty bushels to the acre, may barely pay the expenses of cultivation; but fifty bushels, without any increase of land, or labor in planting, cultivating or harvesting, may leave a clear profit of twenty bushels per acre. It will be said that such cultivation exhausts the soil. It does not exhaust the soil any more than poor cultivation exhausts the soil; and it is followed with this remarkable difference, that it affords the means of enriching the soil and restoring its exhausted energies, which poor cultivation does not. Who ever heard that a farm became exhausted by good cultivation? Whose farms are in the best condition; the farms of those who grow the poorest, or those who raise the largest crops? Farms may be exhausted by growing the same crop too often, in immediate succession on the same land; by carrying off the products from, instead of consuming them on the farm, and thus returning nothing to replenish the soil in the form of manure; but under a wise and skilful and liberal husbandry, it would be difficult to find a country exhausted of its fertility by production. Look at our immense forests, and calculate what an enormous amount of vegetable matter is contained in the timber upon an acre of ground. But is the soil impoverished or enriched by it? Is not the vegetable pabulum, the food of plants, constantly increased by the growth of this heavy timber? Would land become more rich by leaving it uncovered and without plants? Does a naked fallow enrich the soil? A fallow may benefit the farmer by the destruction of noxious weeds. The land is benefited by being stirred, and exposed to the influence of the air, and dew, and frost, and rain. But would a fallow kept constantly clean, and extended even through a series of years, do any thing to increase the fertility of the soil? Undoubtedly, a large proportion of the carbon of which plants are composed, of the food of plants is derived from the atmosphere, of that which is above the ground, and that which is within the ground; but as undoubtedly this is received only through the organization of the plant, through its leaves and stem. The living plant itself decomposes the atmosphere, and appropriates to its own growth and nourishment that which it requires. So, likewise, it decomposes the vegetable matter already existing in the soil, in a state of decay, and recovers the food, which, in the dissolution of a previous vegetable growth, has there been stored up for it, and is held ready for its use. With the exception of the salts or the mineral substances, which are found in plants, and which in any case constitute comparatively a very small proportion of their substance, they derive all their food and nourishment from the air, either directly or indirectly; directly through the leaves and stems, by a process of absorption well understood, in which the elements of the air are decomposed, and its carbon appropriated; and indirectly through the decayed vegetable matter or humus of the soil, itself the product of former vegetable growth.—So far then from vegetable production serving to impoverish the soil, it is the means of increasing its fertility. In proportion as we cultivate and enrich our lands from their own resources, under a judicious arrangement and management, they become constantly more and more fertile. By the beneficent constitution of Divine Providence, the earth, while it contributes to the support of man and beast, is designed to become more productive, or to keep up its richness, from its own activity. It is like the fountain of true charity, and beautifully emblematical of the Divine beneficence; the more it expends the more its abundance increases. It is like the human mind; the more active it is rendered, the more its powers are invigorated; the more it does the more it can do; and the more its treasures are poured out, the more its fullness is enlarged. The great object of the art of agriculture is therefore yet to be achieved. What has been done once, can be done again. There is no monopoly of power in this case.—Nature is uniform in her laws and operations. It is an old saying, that "fortune favors the brave;" that is, men find their powers increased with their activity; according to the Latin proverb, "they are able because they believe themselves able." In many respects they command fortune. Taking advantage of the simplest of nature's laws, and using her forces as she designed they should be used, she is never wanting on her part, but seconds every effort for improvement; and the more readily and cheerfully as these efforts are the more spirited, energetic and determined. If any man has raised one hundred bushels of corn, or sixty bushels of wheat to an acre, who will pretend that it cannot be done again? No farmer, who deserves to be called a farmer in the highest sense, and to take rank among the noblest of this nature's nobility, the lords of the soil, ought to remain content until he has done it. When he has accomplished this, then he should not be satisfied until he has done even much more than this. There is undoubtedly a limit beyond which we cannot advance. All human attainments are necessarily finite. But who knows where this limit is?—Who ever went so far as to be certain that he could go no farther? The difference between that which cultivation has produced already in some hands, and that which is ordinarily produced, is very great, and sufficient to occupy the enterprise and ambition of most farmers, for a long time to come. But let them make the attempt to do all they can do, or rather all that can be done. They may not succeed at once. Few men succeed at once in any great enterprise. But let them try again, and again, and again.—If, after doing their best, they fall short of the goal of their hopes and expectations, yet there is a great pleasure in trying. There is a great satisfaction to a generous mind, in the mere pursuit of a good and useful object. An immense benefit comes to the community from an exam-

ple of intelligent and persevering exertion. Let there be a generous ambition and a constant stimulus to enterprise, in all the departments of human industry and activity. When the heart beats, the impulse is felt throughout the frame; and you cannot quicken the stream of life in any one part, without accelerating the circulation through the whole body. Go on, then, trying to do better and better. The farmers have been too often the sport of the rest of the community for their sluggishness, their indifference to improvement, and their incredulity in respect to what has been done, where any thing extraordinary has been effected. Injustice has often, but not always, been done to them in this matter. They should shake off this apathy. They should wake up. While every other art is advancing in the career of improvement, almost with the speed of a locomotive engine, they should whip up their team, and not be distanced in the competition. There is a beautiful circumstance connected with agricultural emulation. In many of the pursuits of life, one man gets rich by making another man poor. He climbs the ladder by putting his foot on another man's shoulder; or, he builds his own dwelling out of the fragments of his neighbor's, which he has undermined. This is often a crying injustice, and inflicts many bitter mortifications, or arouses vindictive and tiger passions. Emulation in agricultural improvement enkindles no such baleful fires. A man can make no improvements in husbandry, without at once extending the knowledge and advantages of them to others. The enlargement of capacities of the soil, and every increase of its productions, confers an immediate benefit upon the whole community.

* * * I proceed to speak of the other subject suggested; that is, the improvement of the farms themselves. It will be seen, from what has been said, that agriculture is a great art; and that its improvement demands the highest exercise of the highest powers of the mind. If there was ever a subject presenting food for intellectual inquiry, that subject is agriculture, involving, as it does, the most subtle operations, and the deepest mysteries of nature. It is the mind which constitutes the true dignity of our nature. Without it, man would be a mere machine; with it, he becomes a divinity. It is for the farmers to come to a knowledge of the true character of their great calling, and place it where it belongs, among the liberal professions, and among the most exalted of sciences. Formerly, whenever there was a lame or deformed child in the family, it was thought he would do for a tailor or a minister; and if he were a dunce or a blockhead, he would answer for a farmer. These prejudices are gone, and that stock is nearly worked out. Agriculture is assuming its proper place among the pursuits of men; and yielding to none under heaven in usefulness, in honesty, and intrinsic respectability, let us seek to prove, that while it presents objects to call out and interest, it is every way worthy of the application of the most improved talents which ever fell to the lot of man.

Agriculture is not a mere physical effort or labor. It is a science. It is a branch of intellectual philosophy; and its improvement and perfection, if ever it is to reach perfection, are as dependent upon the application and instrumentality of mind, intellectual perception, intellectual skill, knowledge, I will add genius, as any art or science, which is the subject of man's power or attainment.

I am aware that this is not the light in which it is usually regarded. The public sentiment in this respect needs to be reformed and strengthened. Justice has not been done to this art. It is encouraging to belive, that in this matter, public opinion is undergoing a favorable change. I am anxious to see agriculture occupying the place among the humane, liberal and intellectual arts, which belongs to it. But if it would reach and maintain that station, it must prove itself deserving. It may be carried to the throne by acclamation; but, as the public judgment is constantly becoming more enlightened and severe, it cannot maintain its ascendancy unless it is worthy of it. The laurels will be plucked from its brow, if they are not the rewards of merit.—It can prove itself worthy to rank among the liberal and enlightened arts, only by becoming itself liberal and enlightened. Study, inquiry, reading and knowledge, are as much demanded for the advancement and perfection of agriculture, as for that of any art or science. We may expect from science, inquiry and the efforts of genius, the same advantages here as in any other place or objects where they may be applied.

* * * * * *

I proceed now to the consideration of a means of elevating the agricultural profession of more importance, because of much more efficient influence, than any to which I have referred; and that is education, knowledge, intellectual improvement.

I have already said that the glory of man is his mind. If his animal nature is curious, and wonderful and beautiful, his intellectual nature is transcendent and divine. This places him at the head of the animal creation. In his mind as in the seed lie the undeveloped elements of moral growth, and the secret sources of that energetic authority which subjects the most powerful elements of the physical world to his sceptre, and makes him "the monarch of all he surveys." In an art, involving many of the most wonderful operations—and agriculture is that art—dealing in the most subtle agencies in nature, and presenting even to the casual observer, in cultivation and in vegetable and animal growth, a succession of miracles, where is there moroe ccasion for the most subtle inquiries of philosophy?

To the careless observer the deposite of a seed in the earth, its germination, its after cultivation, its progressive growth and its ultimate maturity, are matters of such every day occurrence, that they create no surprise, and are seldom remarked. But they are all replete with wonders, which in their solution have hitherto defied to a large extent the most subtle searchings of the most subtle minds. Where does life repose in this dried kernel, so small and to all appearance so utterly inert? What secret agency swells and protrudes the germ? By what power does it force its way above the surface and gradually expand its leaves, and put forth its flowers, and mature its fruit? How and where does it gather and assort, and at its pleasure use or reject the various materials which go to form the stem, the leaves, the flower, the fruit? How does it construct its exquisite cells and pierce its delicate tubes, and elaborate its juices, and drink in the subtle gases that float around it, keeping that which it needs, sending back that which it does not need, doing that by its own spontaneous energy, which the chemist deems the highest triumph of his skill, and framing its wonderful organism, and compounding its peculiar odors, and mixing in exact proportions its beautiful colors; and all this while, be the situation or soil, the appliances or manures, what they may, remaining true to its kind, so that the grasses do not change into the umbelliferous plants, nor the bulbous roots transform themselves into the cereal grains? Beyond all question all these operations go on according to fixed laws, perfectly simple in their operation, if we could but understand that operation;-and no more the effect of chance or accident, or direct interference of the divine artist than any other of the regular operations of the material world. But what are the influences and effects of seed and soil, of heat and light and electricity and gravity, of dew and rain, and air, and manure, and culture, by what power exerted, by what circumstances controlled, all these are matters for philosophical inquiry, and as yet can scarcely be said to have been approached. The rearing and improvement of live stock, and the whole subject of comparative anatomy and animal physiology, are matters likewise coming directly within the province of the farmer, full of food for the inquisitive mind, and opening a wide field of inquiry. Is education then of no value to the farmer? Has knowledge no use to him? Is his profession a matter of mere servile and animal toil? Has the mind no work to perform here? Is this art to form an exception to every other?

How far is the art in any country from having reached the highest point of productiveness? Where and when, indeed, has the actual capacity of a single acre been tested? Is there no room for inquiry, for the exertion of the highest powers of the mind to determine this point?—The same remarks apply with equal force to the rearing and management of live stock. Any man who compares an improved Durham short horn, or a full-blooded Merino or Dishley sheep, with the common stock of the country, and does not perceive how much has been effected by the exertion of the highest measure of intelligence and skill directed by science, and how much more is yet to be hoped for by renewed and continued efforts, seems doomed to a hopeless stupidity.

If at the same time we look back to what has been gained in the actual increase of the products of agriculture, we shall see equal reasons to acknowledge the advantages derived from the application of mind to this art, and to take courage in view of what may hereafter be gained. I have already touched upon this subject. Half a century ago, fifty bushels of Indian corn to the acre would have been regarded as an extraordinary yield. A crop of a hundred bushels is not now uncommon, and more than one hundred and seventy have been produced in this State. In Scotland a few years since, thirty bushels of wheat would have been beyond the average yield even of the best cultivation. Under a system of under-draining and subsoil ploughing, sixty are not uncommon. It is not long since the system of leaving half the ground fallow was deemed indispensable, in order to recruit the exhausted lands; now, by a judicious rotation, alternating white and green crops, the land is kept uninterruptedly in production.

Education may be considered in two aspects; first as general, embracing all the common subjects of reading and inquiry; second as specific, limiting itself to the particular objects of the agricultural art. Both are equally conducive to the respectability of the profession. We see every where, what an influence and standing the high cultivation of the mind gives to every man who has it in our community. No official station, no mass of wealth so elevates a man; and even if we were cursed with the aristocratic distinctions which prevail in other countries, such is the spreading influence of intelligence, that the cultivation of the mind would enable the man to overtop them all. To attain excellence in any art, the principles of that art require to be made the objects of specific inquiry and study. But giving to these considerations all the prominence we may, success in any art or science will essentially depend, not merely and not more, upon the knowledge of the particular principles or elements connected with it, than upon the strengthening and enlargement of the mind by general knowledge.

We must likewise observe an obvious distinction between the knowledge of the practice of, and the knowledge of the principles of an art. Men may thoroughly understand the principles of an art, without knowing any thing of its manipulations. The philosopher may investigate and explain with the greatest advantage to the common farmer, the principles of vegetation, and the operation of manures, without himself having even so much as reared a single flower, or stuck even a garden spade into the ground. In order to a successful practice, the art must be learnt as well as the science, the execution as well as the theory. The best prospect of success is when they are united; when science directs the application of art, and art in its turn demonstrates the lessons, and shows the proper qualifications and necessary limitations of scientific principles.

To render the profession as respectable as it

may be, they should be combined. The farmer's vocation in this respect presents singular and extraordinary advantages. His seasons of relaxation from toil in our favored climate furnish enviable opportunities for reading and inquiry. Besides this, none of the labors of the farm, excepting where they are excessive, require any intensity of application or any abstraction of mind, which would interfere with the most active exercise of the intellectual powers on subjects quite foreign from his immediate occupation. The farmer may commune intimately with nature even when bending over his hoe; he may talk reverentially with God about his wonder-working providence from between the handles of his plough; and he may often in his fields hear the deep voice of a divine philosophy speaking to his soul, as the shepherds heard a message from Heaven, while they were counting the stars and watching their sleeping flocks upon the plains of Babylon.

MANURE.

Comparative benefits of Manure turned under or applied on the top. By Dr. W. J. Dupuy.

Your society requires of each member to contribute something in the way of experiment to advance the great cause of agriculture. Although just recovered from a severe indisposition, I am, nevertheless, unwilling to be a delinquent, though I must urge that as a reason for the very brief and summary way in which my communication shall be made.

I proposed at your last meeting to give the result of an experiment, the object of which was to establish the comparative merits of fallowing in putrescent manures with marl, and of the application of similar manure, on the surface, after the fallowing in of marl.

During the summer of '41, I marled an exceedingly poor piece of land, at the rate of 250 bushels to the acre, averaging from 40 to 50 per cent of carbonate of lime. I should suppose the land would not produce one barrel of corn to the acre, in its unimproved state. During the month of November, I began to haul out, as I found leisure, with a pair of carriage horses, good putrescent manure, from my lot in town, I should say about the same quantity to the acre, of which marl was applied. In the month of January, the marl and manure having been scattered, the field was fallowed. I will say, however, that up to this time, not more than half the field had been manured. The manuring progressed, without any delay, after the fallowing, upon that portion which had not been manured, though fallowed with the marl as before stated. I was not able to procure manure enough of the same richness to extend throughout the field, though enough to extend a considerable distance beyond, and contiguous to that which was turned under. The last of the field was manured in the spring, with the best rotted manure which I could procure from my winter farm-pen—all spread broadcast. The whole field was cultivated alike. Throughout the whole season, a marked difference could be seen to the line, through the field, in favor of that portion where the manure was turned in at the time of fallowing; that which was top-dressed in the spring, with the farm-pen manure raised during the previous winter, being inferior to either. And here I would remark, that the theory of the decomposition of manures, and the necessity of applying them in a partially decayed state in order to secure the dissipating gasses, has, in my opinion, led to the opposite error of applying them before they are sufficiently decomposed. Such has been the result of my experience for years. It may perhaps be my misfortune in not knowing the precise state when the manure should be applied.—Though, in fact, I have been able to get very little from my winter farm-pen in a suitable state, (according to my notion,) to apply during the spring, notwithstanding it has been my practice to heap it in February, which very much facilitates the decay. With these views, I have been compelled to let a great portion of my farm-pen manure remain for summer application.—On this subject I should be glad to be properly informed.

I regret that I am not able to state to the society, in something like definite terms, the comparative product on the different portions of the field, as I had proposed. It will be remembered, that in August there was an easterly storm, which laid prostrate the corn. Notwithstanding this, however, (although it might have been attended with some difficulty,) a measurement could have been made, but in a journey which I took about the time of gathering corn, my hands had, before my return home, gotten in the whole field, which put it out of my power to make the comparison. If, however, I should venture to guess at the comparative result, I should say that that portion of the field which had the manure fallowed in, produced four barrels, while that which had the top dressing of the same kind of manure did not produce more than 2½ or at most 3 barrels.

While I am on the subject of this communication, I would state a few facts which may not be uninteresting to the society. In May or June, 1841, one of the auctioneers of our town stopped me to propose to let me have some spoiled shad, then lying at his door, provided I would take them away in a given time. Having obtained from the police master, (who was about to impose a fine for such a nuisance,) an extension of time sufficient to enable me to remove them, I set to work, and in a few hours carried to my farm 17 barrels. These I deposited in one pile in the field which is the subject of this communication, and covered them over well with marl, supposing that they would be in a properly decayed state to spread as manure for the corn this year. Indeed, from the offensive character of the fish, I had supposed they would be in a condition to fallow in during the winter. However, during that whole summer and winter, and subsequent spring, (1842,) I was surprised to find, from the occasional exposure made by the scratching of dogs, that the fish were not only *not* decayed, but that they even smelled sweet.

Even down to the latter part of the last summer, some exposure showed that they were still sound. Whether they will be suitable manure for my crop of oats next spring is still to be seen. From the prominence of the bulk at this time, I fear they will not, but even if they should, there will be a space of nearly two years necessary for their decay. Their state of preservation may be judged of when I state that it was often a subject of regret with my negroes, that such fine fish should be thrown away, and I believe, but for my restraints, they would have used them frequently for food, being used to fish as a diet, and very fond of them.

There are several reflections to be drawn from the facts just stated. It is evident that marl or carbonate of lime is antiseptic, and purifying in its effects. At the same time it may be a fact that fish are slower in their decaying and decomposing process than most other animal substances. If marl or lime arrests the decay of substances intended for manure, is it the most suitable thing with which such substances should be enveloped and brought in *immediate* contact, the object always being to procure as speedy decay as possible?

That the marl has the faculty to arrest and fix, as it were, for useful fertilizing purposes, that portion of the decaying matter which would evaporate and otherwise escape, I do not doubt; but perhaps it would be better to let the marl be on the outside of such a bulk as has been described, so as to arrest this evaporating portion as it would escape on the exterior, and at the same time not interfere with the decomposition which should go on in the interior. I would remark, however, that I have not observed the same slow decay where cows and horses have been thus enveloped with marl; thereby leaving the impression that there is something peculiarly slow in the decay of fish. With these views, I would say that it would perhaps be better to cover such a bulk first with earth or vegetable matter, which would not interfere with the decay, and then the superincumbent covering of marl.

THE HESSIAN FLY.

A few years ago I commenced the business of farming, more for the purpose of a pleasant relaxation from professional life, than with the hope of gain; and my fondness for the occupation has led me into many experiments and much close observation of things pertaining to the subject of agriculture; and I do not know but it may lead me to trouble you and your readers occasionally with the result of them. If I supposed I could add any thing to that spirit of enterprise, which you and others seem to have awakened among the farmers of this day, or suggest an idea which a practical farmer might turn to a valuable account, I should feel gratified. In my pursuit of information on this subject, whenever I have found an opinion with regard to a fact, a cause or an effect, to be generally entertained by farmers whose attention has been called to the subject, I look upon it as entitled to respectful consideration, even if it does not at once command entire belief, it is worth a book of philosophical theory.

As you know, this is a wheat growing district, and our farmers may be supposed to know something of whatever concerns the cultivation of that grain. They entertain an opinion with regard to the Hessian fly and its appearance, which is natural, and which my own observation has convinced me is in accordance with the truth. It is a big-bellied insect, which makes its appearance in the fall, when the mildness of the weather will admit, especially at that season called *Indian summer*, and its coming is easily discovered; when it alights upon the ground, it divests itself of its wings and assumes the appearance of a large black ant, and from its hurried manner, seems to be seeking a place of deposite for its egg; this it soon finds, either in the crevices of the ground, under a clod, or in the wheat plant; and not always in the latter as is sometimes supposed. After the egg is deposited, the insect seeks shelter for itself in the ground, where it remains during the winter; and either it or its progeny appears again in the spring, to go through the same work of destruction. The opinion is entertained by some, that the egg deposited in the fall remains to be hatched in the spring—but not so; nature makes better provision for her creatures, than to cause the egg to be laid in the fall, exposed to the frosts of winter, to be hatched in the spring. The egg laid in the fall does its injury to the grain then, or not at all: its effect is then perceptible; and it is the reappearance of the fly in the spring which repeats the evil. My observation has convinced me that this is the Hessian fly; and that there is a most infallible remedy for its destruction—as certain as it is simple—the use of the roller. A very little care and observation, at that season of the year when the farmer expects its approach, will discover its presence; and then is the time, whether it be spring or fall, to roll the wheat fields; the weight of the roller not only destroys the insect itself, whose size and shape prevent escape, but it destroys also the tender egg, whether deposited in the wheat plant or elsewhere. I have used the roller for six years, and I have never seen the effect of fly in my wheat, while crops around me have been partially destroyed by it.

W.

Farmers' Cabinet.

To Wash Woolen Goods.—The art of washing woolen goods so as to prevent them from shrinking, is one of the desideratum in domestic economy worthy of being recorded, and it is therefore with satisfaction we explain this simple process to our readers. All descriptions of woolen goods should be washed in very hot water with soap, and as soon as the article is cleansed, immerse it in cold water; let it then be wrung and hung up to dry.—*Southern Planter.*

LIEBIG'S ANIMAL CHEMISTRY.

The ancients held that all bodies were composed of fire, air, earth and water, which they called elements. The chemists of the present day enumerate fifty-five elements. Of these only a few enter into the composition of organic beings. Into the texture of plants and animals minute portions of lime, iron, silex, soda, potash, sulphur and phosphorus enter; but it is carbon, nitrogen, oxygen and hydrogen, that constitute the main bulk of their solids and juices. These last are the alphabet, so to speak, out of which the beautiful volume of the living world has been composed. Widely as plants and animals differ in outward show from the atmosphere they breathe and the soil in which they are fixed and on which they tread, they present on analysis no element which is not found in the mineral kingdom. It may well excite surprise that the blood, mantling in the cheek of female beauty, and the brain which gives manifestation to the mind of the orator and poet—that the muscle of the herculean frame, the viper's venom, the food that nourishes, and the vegetable poisons that destroy, the nectar of flowers and the noisome exhalation of marshes, all, however varied in form or opposed in quality, consist of these four elements in endless combinations—all derive their shape and strange diversity of attributes from varying proportions of oxygen, carbon, nitrogen and hydrogen.

Animals and vegetables agree, in deriving their existence from parents, in growing from small beginnings to a determinate size, and then yielding up the living principle, and mouldering into the elements from which they grew, by which they are easily distinguished from the inorganic matter which constitutes the mineral world. Animals grow by imbibing oxygen and eliminating carbonic acid; vegetables, on the other hand, absorb carbonic acid, retain its carbon, and emit the oxygen. They both live in the atmosphere, which is equally indispensable to either race, but each derives support from matters given out from the other. They would alike perish in an atmosphere of carbonic acid, but while this gas is exhaled continually from the lungs and breathing pores of every animal, it is greedily drunk up by the green vegetable, and aids in its nourishment and growth.

Liebig has written with singular ability on the functions of both classes of vital beings.—His admirable treatise on vegetable physiology and agriculture has been repeatedly noticed in our paper, and we propose now to give an outline of his theory of animal chemistry.

A few years ago, very little was known of the chemistry of organic beings. Analysis, it is true, had been effected of many animal and vegetable products; and isolated facts, the value of which was not appreciated, were scattered over the pages of writers on physiology and chemistry. A rude attempt was made at an early period in the history of these sciences to explain upon chemical laws some of the functions of animal beings, but these speculations, for the most part, were eminently and even ridiculously abortive. Where the early chemists hit upon the right track they were soon lured from it by the absurd philosophy of their times, and their best efforts were but slight approximations to the truth. But their labors multiplied the materials of the science, and out of the shapeless mass of observations which has been steadily increasing, the beautiful system of Liebig has emerged.—Since the time of Dr. Black, some of the great minds in every period have been busy at work upon the foundations of animal chemistry, and the science has at last assumed a shape which promises to be enduring. The honor of rearing the edifice will generally be ascribed to Liebig, but this is not entirely just, for, on many points, the most that he can claim is the credit of having worked into a system facts which others had established. This, indeed, was a great work, requiring a genius of a high order; nor is it the only merit which belongs to this author. He has verified results, in numerous instances, by repeating experiments with the utmost care and precision; and he has added by his original researches many important facts to our stock of knowledge on several subjects connected with the functions of living beings. In his hands the materials have been classified and arranged, and have assumed the character of genuine systematic science. We have no hesitation in saying that he is one of the first philosophers of the age, and that the present, like his former work, will compare in logical clearness and original speculation with any that has been produced in modern times.

The power in animals of maintaining an equable temperature under great differences of exposure, is one which has engaged the attention of physiologists since the earliest ages. A man, it has been proved by the most repeated observations, preserves the natural heat of his body whatever may be the temperature of the climate in which he lives. At Palermo, or Algiers, where Fahrenheit's thermometer, in the shade often rises to 100 degrees, the temperature of his blood does not grow warmer than his hyperborean brother, who is exposed to an atmosphere that frequently sinks the thermometer many degrees below zero. What makes the case still stronger, men have often been shut up for a short time in a room, the air of which was heated far above the boiling point of water—to a temperature high enough to broil a beef-steak and boil vegetables, without suffering any decided rise of their own temperature. These are curious facts, illustrating forcibly the independent temperature of animals; and this remarkable function is one of the problems to the solution of which Liebig has devoted a considerable portion of his work. With Dr. Black, Lavoisier, Crawford and others, he regards respiration as a process of combustion, and as we warm our apartments by burning coal and wood, so we keep up the warmth of our bodies by burning portions of our food, which we take in as fuel. The animal body, according to this doctrine, resembles a furnace—the food corresponding to the fuel, and the oxygen of the atmosphere serving, as it does in the furnace, to consume the fuel and evolve heat in the process. Lavoisier has shown that a man of ordinary size, and in perfect health, consumes more than seven hundred pounds of oxygen in the course of the year, without gaining in weight. The man, during this time, has been taking food every day, and Liebig proves very clearly that a large portion of it must have united with the oxygen to form the carbonic acid, fifty thousand cubic inches of which are daily exhaled from the lungs of an adult. Now the conversion of carbon into carbonic acid is essentially a heating operation. It never takes place without the extrication of heat. The union is rapid in our fire-places, and the quantity of caloric emitted in a given time is very great; but the amount of heat generated by the combustion of a specific quantity of carbon is a fixed quantity. It is evolved slowly from the mass of fermenting vegetable matter, from the malting grain, for example, and from the heap of half-cured hay, but the number of degrees of heat thus given out is not less, for the quantity of carbonic acid formed, than if the combination had been the work of a few moments.

A man in good health, and taking moderate exercise, consumes, according to our author, nearly fourteen ounces of carbon daily, which escapes in due time, as carbonic acid, through the lungs and skin. For the conversion of so much carbon into the acid, thirty-seven ounces of oxygen are necessary, and in this union, which takes place in the body every four-and-twenty hours, 195,531 degrees of heat must be liberated—an amount sufficient to cause 68 lbs. of water at 32 degrees to boil; or to heat 184 lbs. to the temperature of the human body. If to this, the heat evolved by the hydrogen of the food, during its conversion into water by oxidation within the body, be added, we shall find the quantity amply sufficient to explain the uniform temperature of the human body.

But, in order to maintain this constant temperature, the supply of food and of oxygen must vary with the changes of atmospherical heat and cold to which the individual is subjected. He must take more food in cold climates than in hot, and more in winter than in summer, and his food must also be of a richer quality. And this is the case with the inhabitants of high northern latitudes. The Russian, amid the snows of the arctic circle, devours the raw flesh of the deer, and drinks its warm blood as it flows from the body; and the Esquimaux will eat ten pounds of flesh and perhaps a dozen tallow candles into the bargain, daily, without the slightest fear of indigestion. The people, on the contrary, who inhabit a climate but little below the temperature of their bodies, subsist chiefly upon fruits which contain a small proportion of carbon. At the north, such fruits could not be matured, nor would they be suited to the wants of the inhabitants. It is animal food, and that of the fattest quality, that they need to supply their systems with the requisite amount of fuel. Children, for the reason that respiration in them is more active than in adults, require to be fed oftener; and birds, having large lungs in proportion to their bodies, die of hunger in as many days as it takes months to starve serpents which breathe slowly and consume little oxygen. The animal heat of the two tribes of creatures is correspondent. That of birds is higher than the temperature of man; that of the reptile is but two or three degrees above the temperature of the surrounding atmosphere.

The food of animals, therefore, performs a two-fold office—it contributes to the nourishment of their bodies, and it furnishes the fuel by which animal heat is developed. This is one of the most striking and original of Liebig's doctrines, according to which the aliment of animals consists of two classes of substances, destined to perform altogether different purposes in their economy. The first he calls the *nitrogenized* elements of food, or *the plastic elements of nutrition*, which go to make blood, and execute the various offices of growth and reproduction; and the second *non-nitrogenized* elements, which do not contribute to the nourishment of the body, but are consumed in the production of animal heat. Milk, which is the food of the young animal of so many species, contains both elements. The caseine, or cheese, is the portion which nourishes; it contains the materials for making blood, for the formation of bone, and the other functions of its immature system, whilst the sugar of milk, and the butter supply it with fuel. In wheat, and other grains of this class, as also in the potato, though not to an equal extent, the same admirable combination exists, and these are the chief articles of food for man and for his domestic animals, in nearly all the temperate regions of the globe. The nutritious principle is contained in the gluten; the fuel in the starch, the oil and the sugar. In proportion to the cold to which the animal is exposed, is the consumption of oxygen and of fuel; and as the same is true of exercise, it follows that men and animals who are compelled to labor must be better fed, and that even with an ample allowance of food, if their labor is severe, they do not grow fat.—The starch, sugar and other elements which would be converted into fat, are entirely consumed by the process of respiration. If, with the same allowance of food, these individuals are permitted to take less exercise, the fuel is but partially consumed; and a deposite of fatty matter is the consequence. This is shown constantly in the hog and in the whale, animals which eat largely in proportion to the oxygen consumed—in other words, to the exercise they take—and which consequently grow exceedingly fat. It is seen in the bear also, and in the opossum, in which the fat would seem to perform the double office of protecting them against the external cold, and of supplying the internal heat necessary to maintain life during the frosts of winter. And the opposite phenomena are observed in the deer, and animals that like it are active in their habits, the flesh of which is always compara-

tively lean. The oxygen they consume is sufficient to convert into carbonic acid all the carbon of their food, the excess of which would go to the production of fat. To agriculturists these facts have long been familiar, and it is the well known practice with them to confine cattle to small comfortable stalls, and hogs in narrow pens, where the object is to fatten them in the shortest time and with the least expense of food. But we have not space to pursue the subject further at present.—*Louisville Journal.*

EXTRACT FROM A REPORT ON HORTICULTURE,

Read before the Newbury Agricultural Society, at its Anniversary Meeting, July 27, 1842, by MATTHEW HALL.

Peppers should be sown in the first of April, in drills. When properly up, thin to stand about 10 or 12 inches apart, leaving one or two stalks in a place.

Mustard, for winter use, may be sowed in the latter part of August, or first of September, in drills about 18 inches apart, covered very lightly. The bed on which it is sown, should previously be made very rich. As soon as it is up, thin it out so as to let every plant have three or four inches space between them. For spring use, it may be sown in the same manner in January or February. It should be hoed and kept clean.

Beets should be sown in February or the first of March, in a rich, sandy soil, in rows or drills, 18 inches apart. The seed may be planted in the drills, 10 or 12 inches apart, and three or four in a place; after the plants are well up, thin them to one stalk or plant, and attend well with plough and hoe. After they have arrived to perfection in the fall, they may be baked like potatoes, and preserved all winter. Transplanting of beets does not answer well.

Bush or bunch beans may be planted in the last of March, in a rich, sandy soil, in some part of the garden that will shelter them from the north wind, and give them the sun in the early part of the day. If it should be likely to frost, cover them at night. They may also be planted about the full moon in April, and for a succession of crops on to the 4th of July, or even later. They may be drilled in rows two feet apart, and after they are well up, thin to two stalks, 18 or 20 inches apart. Stick (or pole) beans may be planted from the middle of April to July in the same manner as the others, except that they should have more distance, say two feet one way and 3½ the other. Have your land well manured, and attend well with plough and hoe. As good seed is of the greatest importance, the stalks you allow to save your seed from, should never a bean be plucked from, till they are perfectly ripe; then gather, shell them out, and dry them properly in the sun, then put them up in a small bag with some tobacco or snuff, and hang them where they can have the air: the tobacco preserves them from the bug in a great measure. The seed should always be saved from the first beans you plant.

Cucumbers, water melons and musk melons, although they can be raised in a garden, should never be planted there. The reason is obvious—if a garden is not rich land, it should be made rich; this sends up grass and weeds very fast, and vines, after they get properly to running, should never be interrupted, and it would be impossible to keep them free from grass in a garden without moving them; therefore, select the poorest sandy old field you have, fence in your patch, lay it off with a plough twelve or fifteen feet square, in December; dig a hole in every cross, two feet deep and two feet wide, (or wider,) fill it up as soon as convenient with corn cobs about two-thirds full, and beat them down with a maul or crowbar. Let your holes stand open all winter. In the first of March, fill up the remainder of the hole with manure, (that from a hog-pen is best.) Plant from the 1st to the 20th of April; put eight or ten seed in a hill, some of them ten or twelve inches apart. But before you plant your seed, mix some of the earth or sand with your manure on the top of the hill, raise your hill about three or four inches above the level of the earth, for fear of rain settling it below the surface, and drowning your seed or plants—When they are up and have four or five leaves, thin them to two stalks, letting the farthest apart thrifty plants stand. When they commence running, lay them so as to run in different directions, so that one vine will not interfere with another. By the time they begin to run, they should be laid by, having your ground perfectly clean. Generally two ploughings and two hoeings will do them. After they have run three or four feet, they should be confined to the ground with cross sticks, to keep the wind from turning them over, (I mean the watermelon vine.) No sickly or deformed melon should be allowed to set on a vine. If you wish to raise large water melons, let but one mellon set on a vine till it nearly gets its growth; also top your vine. As seed is of the greatest importance, save your seed from those melons or cucumbers, which grow nearest the root of your vine; these are decidedly the best. Vines from these sced wil yield moreand come earlier.

Dr. LEWIS FEUCHTWANGER, of New York, in a letter to the editor of the American Agriculturist, says—The following preparation will effectually exterminate all caterpillars, snails, bugs, beetles, earth fleas, leaf lice, ants and other insects on fields, trees, bushes and hedges.

Take diluted Pyroligneous acid, 1 gallon; white oak bark, 1 lb.; urine, half gallon; garlic, half pound. After soaking the oak bark and garlic for two days in the acid and urine, strain them off and sprinkle once a week or oftener, the trees infected with insects, or the pea, cabbage, &c., and they will be preserved for the season.

Extract from a very sensible Address of JA'S RANKINE, *of Cananadaigua.*

SOURCES OF HAPPINESS.—Surely pecuniary gain should not be considered as the scale in which all things are to be weighed. It has been said that wisdom is better than riches—and it is indeed so. The advancement of fortune is a laudable object; but we have received the capacity for social and intellectual enjoyments, and it could not be meant by the Giver that we should receive it in vain. All our struggles in life are directed to increase our happiness—if, however, we confine our endeavors merely to the enlargement of our possessions, the gratification which may arise from success will still be a gratification to which a rational and reflecting being should be loath to confine himself.—The highest order of happiness, and that least exposed to vicissitudes, is to be found in the cultivation of our intellect, and the improvement of our dispositions. Knowledge may put nothing immediately into the purse; but it will bestow a purer and more lasting enjoyment than any thing contained in the purse can afford. The more we mingle in friendly intercourse with our species, the more will our benevolent feelings be expanded; and if, in addition to mental culture, a man be at the same time in peace with himself, and of charity towards all men be affirmed to have the means of happiness independent of worldly circumstances.

THE FARMER'S LIFE.—Gentlemen, allow me to congratulate you on the happy situation in life, in which those are placed, who are engaged in the cultivation of the earth. In independence, in healthfulness, in amenity, it excels every other. Prudence and economy, and a just estimate of his position in society, are requisite for a man in all situations; but to whom are the facilities to independence so great as to the farmer? Favorably situated for avoiding temptations to be led away by the vanities of society, he is surrounded with every thing necessary to comfortable existence. His life, indeed, is a laborious one; but labor is no evil—it conduces to the vigor of the body and of the mind, and certainly, it is not in idleness that happiness is eve found. The very place in which his labors are carried on is favorable to him. He lives, n o pent up in walls, and in a confined or insalubrious atmosphere, but in the free airs of heaven, with the boundless sky for a roof, and surrounded by every thing that is lovely in nature, and calculated to lead the mind from nature to nature's God. The sentiment of love and admiration of the beautiful works of the Creator, leads us to see him, and to know him, and to adore him. He who can plod on in his fields, insensible to these beauties, is truly of a cloddish heart. He is incapable of experiencing that sublime love of the Deity, which alone can elevate the soul above the miseries that envelope all worldly concerns, and give him as it were, a foretaste of the pure and exalted joys of a future state."

REARING OF CHICKENS.

TO THE EDITOR OF THE FARMERS' REGISTER.—You some time since requested to know my mode of raising chickens, and I take great pleasure in forwarding the same to you.

I must, in the first place, give you my plan for constructing a "hen house," as I consider it one of the most important things about the rearing. My "hen houses" are built of pine logs, with the bark taken off, and chinked in with wood. On the inside of the house, and about one foot from the walls, I plant forks, across which I lay poles for the fowls to roost on, being careful that no part of the poles or forks shall touch the house. About once in four weeks, I have these poles washed or replaced with new ones; by these means I get rid of lice, if any should have found their way to the roost of the fowls. My boxes for the hens to lay in are put upon forks in the same manner, being entirely detached from the house, and are taken out once in three or four weeks, and new nests made for the hens.

Since I have been pursuing this plan, I have never been troubled with lice, nor have I ever lost any considerable number with the gapes, a disease which I am convinced proceeds from the young chickens inhaling hen lice from the parent hen.

In chickens having the gapes, a worm is found in the larynx, near the lungs, which continues to increase in size until the whole aperture in the windpipe is filled up; and the chicken then suffocates. I am convinced that this is the cause of the disease; for if the parent hen is kept clear of lice, the young escape the gapes.

When I find my hens are ready to go to setting, I always, in the early part of the season, set two on the same day, and when they hatch, put them together in coops, or hovers, and feed them on corn bread; until the chickens begin to feather, when I give them small hominy. At this time I take away one hen, and confine her for a few days, when she will become weaned, and again be ready for setting in a few weeks.

In the summer, when the young chickens do not require the protection of the mother to hover them, I frequently give as many as fifty or sixty chickens to one hen.

Last season I set six turkeys, and they only brought out a sufficient number for three of them to attend to. I set the remaining three on hens' eggs, taking care to set a hen at the same time. During the season, each turkey brought out three broods, amounting in all to 150 chickens.

The turkey hens while setting require to be well fed and watered, and if well attended to, will set most of the summer.

Since I have adopted the above rules, I have been very successful in raising chickens, and can recommend them to the patrons of the Register. Very respectfully,

WM. B. GREEN.

CANDLES.—Prepare your wicks about half the usual size, wet with spirits of turpentine, put them in the sun until dry, then mould or dip your candles.

Candles thus made last longer, and give much clearer light. In fact they are nearly or quite equal to sperm in clearness of light.

WEDNESDAY, APRIL 5, 1843.

OPINIONS OF THE PRESS, &c.

We beg leave to avail ourself of this occasion to tender to our brethren of the Newspaper press, and also to those friends who have taken an interest in extending our circulation, our most sincere acknowledgments for the numerous very flattering notices they have taken of the "Southern Cultivator," and their exertions to have it generally disseminated among the planters. It is alone by a very general circulation, that we can hope to accomplish much, in exciting among agriculturalists a spirit of rivalry and improvement, from which we feel confident much good to every class of society will certainly result. We therefore earnestly hope that our friends will not flag in their exertions, and we pledge ourself, that whatever of zeal and ability we can bring to the work of rearing upon a firm basis an Agricultural journal at the South, worthy of the cause in which it is engaged, shall be most cheerfully brought to bear. To accomplish successfully such a work, much depends upon the planters themselves, and we hope they will not consider us importunate in again urging upon them, in this connexion, the importance of giving us their aid, by forwarding to us their views on all subjects coming within the sphere of our work.—And particularly do we desire to have such agricultural facts as are at the command of every intelligent, reflecting planter. We are aware that very few, if any, of our planters are in the habit of committing their thoughts to writing, and many, consequently, feel some delicacy in doing so—but they should not be deterred from it by any delicacy of feeling. All we want is a plain statement, the plainer the better, drawn up in the very language in which they would communicate a fact to their neighbor, and if it should need any polish, we will take great pleasure in bestowing whatever labor we may deem necessary. They should reflect, and we hope they will, that they are a common brotherhood, engaged in the promotion of the greatest work that engages the attention of mankind, and regard it their duty to afford to others the benefits of their experience and observation. If this be done the interest of the "*Cultivator*" will be greatly increased, and its capacity to do good much improved.

To Eradicate Corns.—Take a small piece of flannel which has not been washed, wrap or sew it around the corn and toe. One thickness will be sufficient. Wet the flannel where the corn is, night and morning, with fine sweet oil. Renew the flannel weekly, and, at the same time, pare the corn, which will soon disappear.—*Leeds Intelligencer.*

A FINE BERKSHIRE PIG.

We had, yesterday, the pleasure of examining one of the finest Berkshire male pigs we have ever seen. He has been imported from Ohio, by our enterprising fellow citizen, Col. John Bonner, of White Plains, Green county, and for beauty of symmetry, high form and fine size, is unsurpassed by any pig we have had the pleasure of viewing. He is the produce of Mr. A. B. Allen's of Buffalo, New York, celebrated imported boar, Windsor Castle, out of one of his finest imported sows, and is now about ten months old. Although his appearance at this time has doubtless been materially effected by his long voyage, (having been shipped in the early part of November last, on board a boat that was locked up in the ice on the canal,) he has attained a fine size, and looks to be in fine health, and, we think, will be an important addition to Mr. Bonner's already fine stock. We cannot commend in too flattering terms, the spirit and enterprise with which Col. Bonner has entered into the work of improving the breed of hogs in Georgia, and we sincerely hope we are destined, ere long, to witness a similar spirit of improvement in every department of agriculture.

PLOWING MATCH.

One of the most important steps toward the improvement of agriculture, is the introduction and use of proper implements of husbandry, and the agriculturists of Europe and America, where much attention has been paid to this subject, have instituted the most thorough and satisfactory tests to ascertain the comparative value of every implement in use. With the view of ascertaining the value of the various kinds of plows introduced from time to time, they have instituted at all agricultural fairs "*plowing matches,*" at which the various plows are made to exhibit their capacities for their respective uses, in the presence of a committee competent to decide upon their merits; taking every thing, the width and depth of furrow, the beauty with which each executes its particular purpose, the weight of draft, &c. &c., into consideration.—The committee after minutely scaning every thing, proceed to award the premium to the best plow, and hence it is recommended to the favorable consideration of the public. Although scenes of this sort are very common wherever much attention has been paid to improving the system of Agriculture, they are very rare in the South, and the announcement, a few days since in the city papers, that one would take place on the Commons, drew quite a crowd of persons to witness the novel exhibition, which was got up by the agent, for the introduction at the South, of Barnaby & Mooer's "*Side Hill Plow,*" as it is generally denominated, to show its superiority over all other plows in use at the South for effectually turning land. This plow is constructed with a mould board on each side, and by changing the beam from one side to the other, is made to turn its furrow either to the left or right, or, without changing the beam from the centre, to turn only on one side. We regret much that we have no *cut* that we might exhibit its form to the reader, which would be much more satisfactory than any description we can give of it. They are for sale in this city, and as they surpass any plow we have ever seen used for turning land, we hope our planters will test their capacity and adaption to southern culture. They are highly appreciated at the North and East, and have received several premiums at the various agricultural fairs. Of them Mr. E. Cornwell, in a letter to the editor of the "*American Agriculturist,*" says:—"I am satisfied from a practical acquaintance with the best plows in use, that no plow has yet been invented that can compete with this for any length of time, as a plow for general use. Its ease of draught and its adaptation to every kind and shape of plowing, and the perfect manner in which it performs its work, are advantages that cannot be combined in any other plow."

For the Southern Cultivator.

Lexington, March 18, 1843.

Mr. Jones—Hoping your "Southern Cultivator" may long be the source of valuable information in agriculture, I seize an early occasion to communicate with your readers on the culture of Sweet Potatoes. I am sure I will have the blessing of many a negro, baby and housewife next fall for this letter.

Sir, the old method of planting sweet potatoes in hills and ridges, in this dry climate, and on our hard upper country clay lands, is all wrong. Potatoes must have *moisture* and *soft earth* to do well. But they lack both in the common culture. Hills and ridges are the driest forms in which you can put the soil. *Flat* culture is the only right kind for potatoes, or any thing else, in our burning climate and on our clay uplands. Potatoes should be planted as *flat*, and may, in that way, be planted as *easily*, as corn.

First, break up the land well; then lay off rows four feet wide with a shovel plough; run *deep* in the same track with a rooter; and then, if you want it perfect, deeper still in the same furrow with a common new-ground coulter.—Next, list upon both sides of this in the same way; that is, with shovel, rooter and coulter, one right in the track of the other. This makes deep work, and the deeper the better. It is soon done. Your ground is now ready—deep, loose and moist, and will keep so all summer.

Now for planting and culture. With a rooter draw a shallow furrow on the top of the list, just over the first shovel track, to guide you in dropping. In this drop the seed, cut roots, sprouts or vine-cuttings, twelve or fifteen inches apart, and cover lightly. Plough them a few times, just like corn, running close to the potatoes with a rooter, and finish off each working with a cultivator, or some other plough to keep the middles flat.

This mode of culture is not one fourth as troublesome as hills; the crop is wonderful.—This is not theory, but is my constant practice. By this mode the vines never turn yellow; the crop comes forward early in August, and the owner has no chance to talk about "small potatoes."

Before your Cultivator appeared, I had promised this article to our mutual friend, Clayton, for the agricultural column of his Athens Whig;

but as he will be sure to see it in your paper, he will excuse me for sending it first to your Southern Cultivator; as the proper depository or magazine of all such useful facts in our Georgia agriculture. Yours, &c.

W. McKINLEY.

P. S. Don't fear to try this plan in the approaching planting. There is no mistake in it. It saves time and work, and makes two bushels for one in the old way.

POLL EVIL.—This disease, says the Southern Planter, has generally been considered incurable, but Mr. Samuel Terrill, of Caroline, an old gentleman of the highest respectability, called at our office a few days since, to say, that he had found an unfailing remedy in the little evergreen, commonly called the *ground ivy*. The leaf is gathered and dried before the fire until it can be pounded, when a table spoonful is mixed with an equal quantity of slacked lime, and the swelling, having been laid open to the bone, the mixture is laid in the wound, and kept in place by a bandage. Mr. Terrill says that he has used it himself, and that he has known it frequently used by others, and that, in no instance, has the first application failed to effect a cure.

LIME IN AGRICULTURE.

Of the mineral substances that have been employed to improve the soil, lime is the most important. All our lands seem to me to be susceptible of great benefit from it; and I believe that in many parts of this district it can be obtained on such terms as to create a probability that it may be profitably applied. The theory of its modes of action involves chemical principles, which it would be beyond my limits to attempt to explain here; I may briefly state, however, the facts connected with its various effects.

It renders stiff and tenacious soils more friable—and light and sandy soils more retentive of moisture. It disposes all vegetable matter in the soil to decompose, so as to supply the nourishment of living plants, and it makes the nutritive matter itself more salubrious. These last effects may be seen in familiar instances.—If a little quick lime be added to a heap of leaves or rotten wood, it is soon reduced to black mould; and if a little be sprinkled on the rank spots which get up in pasture fields, and are rejected by cattle, they will shortly be eaten down. It is not more active in rendering the vegetable matter of the soil available, than it is in giving vigor to the plants, and goodness of quality to the grain; and on no grain are its effects so remarkable as on wheat. I knew a gentleman who from having a great command of manure, thought that he might dispense with lime. He raised by measure as many bushels of wheat on the acre as his neighbors; but it was coarser in quality, and therefore lighter, and in the British markets great discrimination of price is made on account of quality; so that he lost in two ways. He had at last recourse to lime, and with complete success.

In cold and humid climates, it is not considered that old turfy lands can be profitably broken up without lime; the straw will be abundant, but the grain light and unmatured—treated with lime, these lands are the most productive. In our climate, the vegetable matter has no such a tendency to become peaty and inert, and lime may not, to such a degree, be necessary for the purpose of promoting decomposition; but it would in every case make our wheat of better quality. In our best lands, it would give health and vigor to the straw and render it less obnoxious to the diseases to which luxuriance is exposed, and it would make lands, at present too rich for bearing grain, capable of producing healthy and productive crops. From what has been said, it will follow, that it would be improper to apply lime to impoverished land, unless at the same time accompanied with manure, without which it would aid in the robbery of the soil. For other reasons, it should not be applied to wet land.

In calculating the expense of liming, the permanency of its effects should be taken into account. If a proper dose be administered, there will be no need of a repetition of it for 15 or 20 years. What the dose should be, must depend on the quality of the land; but generally speaking, it should be increased as the land is more adhesive, or as it is more filled with vegetable matter. There are no soils, probably, that would be benefitted by less than 100 bushels to the acre, or which would require more than 300 to produce the maximum effect. As, in proportion to the mass of the soil, the quantity of lime used is small, the two should be mixed together as equally and intimately as possible. The lime may be allowed to lie till it falls down into a state of flour, and then be spread out, when the soil has been previously well pulverized.

Rankine's Address.

HOME IMPROVEMENTS—GOOD ADVICE.

To the editors of the Tennesree State Agriculturist:

GENTLEMEN:—Is it not the desire of every parent that their children should love home? If so, beautify and adorn your homes, so as to make them the most pleasant and loveable place to them.

"The spring time is coming," the season when dame nature decks herself in her gayest attire, and all things living seems endued with new life and vigor. Begin then with nature; she will lend you kind assistance; plant trees, fruits and flowers, tend, work and water them, let your children assist you, give each his portion in the labor of love—who that ever planted a flower, and watched it from the putting the unsightly root into mother earth, to the first peeping forth of the green leaf, to the full expansion of its beautiful bloom, but looks back with pleasure on his sensations of delight and exultation, as he culled it for the one he loved best? how his face glowed and his heart beat as he eagerly displayed the prize! Who can walk in the garden at dewy eve or rosy morn, inhaling the delightful perfume rising as incense to the giver of all good, from every bud and flower for the sparkling drops kindly sent to refresh and invigorate, and not feel his own heart lifted up in praise and adoration for so many blessings?—The mind is naturally led to harmonious reflections by contemplating nature in her most alluring forms. Adorn your homes then with all her choice productions, so that in after life, when your children are surrounded with care and trouble, home will rise up as a green spot in memory's waste. Let your children share your pursuits, it will make them love home better, more affectionate toward each other, and give them more confidence in you; they will find there is indeed "no place like home," instead of an irksomeness and reserve in your presence, they will feel confidence and consider you their best friends and companions.

Are not the Swiss and Scotch more attached to their wild, rugged, and often barren country, more than any other people? It is because they bestow more labor on it, they toil incessantly in tilling the earth, and feel more affection for that spot. In most countries, the great struggle is, to keep the homestead from generation to generation, while we still continue the "squatting" propensities of our forefathers; our children, like a flock of birds, leave us as soon as fledged—not but I would have them independent, have them so by all means, and to have them so, I would do away the great love of speculation, the making haste to be rich, the effects of which so many are sinking under at this very time; and make our boys *quiet*, *sober* and *intelligent* men, our girls *well informed*, cheerful, healthy, amiable and affectionate. If you wish your boy to be a good son, good brother, good husband and good man, make him love home, it will also deliver him from the manifold temptations that beset a young man's path—he will, by sharing his mother's and sister's pursuits, acquire a greater interest in them, and have a more affectionate regard and greater sympathy with them; it will rub off the rough points of his character, refine and polish him, strengthen and exalt the mind of the sister, add ease and grace to their deportment with the rougher sex. By making home agreeable, you heighthen the affection of your children for yourselves, and prevent their seeking enjoyment and amusement elsewhere—you will have them more under your parental eye, and thus be able to check many an embryo fault kindly and gently, which, if left unrestrained, would wring many a tear of anguish frow your hearts. Has not the Father of ALL made his universal garden beautiful and lovely in the extreme? Is it not enriched with all that is pleasant to the eye and grateful to the taste; even every thing that the heart of man can desire, to make this, our temporary home, a paradise; and shall we not follow such a glorious example, and make the transient home of our children pleasant and sweet. By adorning, making them pleasant within and without, they can in truth say, "there is no place like HOME."

If you think, dear sir, that your paper will not be disparaged, you shall again hear from

AUNT CHARITY.

A TABLE

Showing the number of corn hills and other plants in an acre of ground.

Feet.		Feet.	No. of Hills.	Feet.		Feet.	No. of Hills.
20	by	20	108	5	by	4	2178
19	by	19	120	5	by	3	2904
18	by	18	134	5	by	2	4356
17	by	17	150	5	by	1	8712
16	by	16	170	4½	by	4½	2151
15	by	15	192	4	by	4	2722
14	by	14	222	4	by	3	3630
13	by	13	257	4	by	2	5445
12	by	12	302	4	by	1	10890
11	by	11	360	3½	by	3½	3555
10	by	10	435	3	by	3	4840
9	by	9	537	3	by	2	7260
8	by	8	680	3	by	1	14520
7	by	7	888	2½	by	2½	6969
6	by	6	1210	2	by	2	10890
6	by	5½	1320	2	by	1	21780
5½	by	5½	1417	1	by	1	43560
5	by	5	1742				

MESSRS. EDITORS—I send you the above as a very useful and convenient table that I have compiled for the "Planter." The calculations are, I believe, entirely correct.

Yours, respectfully,

PH. B. WHITE.

Southern Planter.

LICE ON CATTLE.—1. Mercurial ointment rubbed on the animal from the crown of the head to the root of the tail, down the back bone, will effectually kill lice in a day or two. This, however, is a dangerous remedy to use, unless the animal is kept in the stable, and requires great care to preserve him from the effects of cold and wet.

2. Corrosive sublimate is another effectual remedy. This is to be applied as before prescribed, but, like No. 1, is dangerous.

3. A strong decoction of larkspur is also a sure and safe remedy. This should be applied as recommended for No. 1.

4. Spirits of turpentine is also a sure remedy. It should be applied as No. 1.

5. A decoction of tobacco, applied as No. 1, will destroy the lice.

6. A mixture of Scotch snuff and fish oil, rubbed on the affected parts, will destroy the lice.

7. A mixture of soft soap and Scotch snuff, well rubbed on the parts, will also eradicate them.

As an auxiliary to whatever remedy may be used, the currycomb and brush should be freely applied, after a day or two, in order that the hide and hair of the animal may be kept clean. No animal which is well fed, and daily curried and brushed, will either breed or retain lice; the latter operation, however, few who have much stock can regularly attend to.—*Am. Framer.*

TOMATOES FOR COWS.—It is not generally known (says the P. C. Advocate) that this vegetable is a superior article of food for milch cows. We have tried it two summers, and it is decidedly superior to any other vegetable we have yet tried. They add greatly to the quantity as well as to the richness of the milk, and give a rich golden color to the cream and butter, which is at least pleasant to the eye, even if the flavor is not so improved. We do not know, however, that they impart any richer flavor to the butter.

We have known a cow to refuse them when first offered, but soon became very fond of them; others, we believe a large majority, eat them greedily from the first. Thus far we have fed them only in the raw state; but if boiled with corn meal, say half and half, or two-thirds tomatoes, they will doubtless be far better.

To one who has a dairy farm, the cultivation of an acre or two in tomatoes would be repaid by greater profit than any vegetable we know. From one acre not less than eight bushels may be gathered daily from July until frost. There is some trouble in picking them, but then nearly every farmer has children; his little boys—ay, and his big ones too—would not be the worse for a little work. We should be glad to see the experiment tried on a larger scale than ours, and to learn the result.

SPAYING.—We have received from L. Bishop' Esq., of Smyth county, Virginia, the following account of the process adopted in spaying pigs by Rufus Rouse in that neighborhood:

"Fix a plank three feet high. Lay the pig upon the right side on the plank, with two persons to hold the fore and hind legs and mouth. The implements used are a sharp pocket knife and a long crooked needle, with cutting awl-blade edges, and a strong waxed thread. The operator takes his knife and shaves off some of the hair, three and a quarter inches from the hip-bone; he then makes an incision crosswise, so that he can introduce one finger to bring out the uterus; he then cuts off the whole of the uterus and throws it away; he then enters the needle on one side of the wound and brings it up through the other, and secures it with a strong knot. One stich is sufficient. A mixture of tar and hog's lard is used to smear the wound.—This mode of operating is the invention of Capt. Rouse, and I am in favor of the plan; considering it more safe and less troublesome than the other methods."—*Cultivator.*

TO IMPROVE A PINY OLD FIELD.—First belt the trees and cut down the bushes. The following year cut and burn every thing into coal which is large enough, and scatter the burnings. That which is not large enough for coal should be spread on gullies and galls; and this should be completed by the middle of March. Now mark off the ground with a coulter, sow oats (and grass seeds, if you please,) and cover with the same implement. For the purpose of making equal distribution of the manure, and to avoid cost in carriage, the kilns should be placed at about fifty feet distant; and that they may be of about equal size wood should be moved as required. Or if there be a surplus, the wood or coal can be moved elsewhere. At fifty feet distant, we have about eighteen kilns to the acre, which, if producing only one hundred bushels of burned earth and coal to the kiln, is one thousand eight hundred to the acre, which I would apply to the spot, and then comes the blessing.

OLD FLU.
Southern Planter.

CEMENT FOR GRAFTING.—Two pounds and two ounces of rosin, six ounces of tallow, and ten ounces of beeswax. Melt them together, and turn the mixture into cold water, and let it remain till cool enough to handle; then work it as shoemaker's wax. We have used cement thus made, and found that it remained on the stock for years. It is not so soft as to run in hot weather, nor so hard as to crack in cold weather. All of the ingredients for making this cement must be of a good quality.

MECHANICS.

"Out of nothing nothing comes."

The laws of nature, unlike human laws, can neither be changed nor evaded; and for a want of a proper knowledge of simple and unchangeable laws many men waste time and money in trying to produce great effects by insufficient means.

The mechanical powers, as they are called, do not, and never can, create power; they only modify its application.

The power most easily measured is that of gravity or weight; and it is the cheapest of all powers or first movers, when, as in the case of a water fall, nature constantly winds up the weight for us for nothing.

Suppose, then, we have one thousand pounds of water falling ten feet in a minute. No human contrivance can make that water raise more than its own weight to the height of ten feet in the same time. It cannot raise quite as much, for the friction of the machinery must waste part of the power; but, as it may be a small part, let us omit the friction from these calculations.

The effect of the mechanical powers is to enable us, while the original power remains the same, and the rate of its motion the same, to exert a greater power with a slow motion, or a lesser power with a quicker motion. But, in all such cases, the power produced, multiplied by the speed with which it moves, will be found to give the same product.

Thus, one thousand pounds falling ten feet in a minute, may be made to raise ten thousand pounds one foot in a minute, or one hundred pounds one hundred feet in a minute, the same power being required in each case; but no man can make it do more, for, if he did, he would create nothing out of something, which is contrary to a law of nature.

For this reason, all attempts to make a mechanical perpetual motion, have failed, and forever must fail, as such a machine would be equivalent to making a weight raise another equal to itself to the same height in the same time, and enough more to overcome the unavoidable friction of the machine, which friction, however small, is sooner or later to stop the motion, unless an additional power is applied sufficient to overcome the friction.

Therefore every man, who is trying to make a perpetual motion or any other machine which he expects to do more than the power applied to work it, is wasting his time and money in that which will be certain to end in disappointment.

Farmer's Companion.

TO HOUSEWIVES.—Recent experiments in more than one family in this city, says the Delaware Gazette, have established that the plant known to botanists as the *Pologonum punctatum*, commonly called water pepper, or smart weed, and which may be found in great abundance along ditches, roads, lanes and barn yards, is an effectual and certain destroyer of bed-bugs. It is said to exercise the same poisonous effect on the flea. A strong decoction is made of the herb, and the places infested with the insect are carefully washed therewith. The plant may also, with much advantage, be strewn about the room. Elderberry leaves, laid upon the shelves of a cupboard, will also drive away roaches and ants in a very short time.

RED OR BLACK ANTS.—Take a few sprigs of green wormwood, and place them in immediate contact with red or black ants, and they will disappear. I have found this to be effectual after using every other remedy within my limited knowledge.

Another remedy is to sprinkle chalk around the places they frequent. It is said the chalk will cause them to make their exit, but I have not had occasion to prove it.—*N. E. Farmer.*

SOAK YOUR SEED CORN IN SALTPETRE.—It destroys the worm, is not relished by crows or squirrels, and yields much more abundantly than when planted without.

PEACH TREES.—When bearing trees are planted in low places, the blossom buds are urged forward by the warmth of day, and the increased severity of night frosts destroys them. But on hills, these extremes of heat and cold do not occur; hence they generally escape. One of the early settlers of Wayne county, near Palmyra, twenty-four years ago planted a peach orchard on a hill nearly one hundred feet above the average height of land; and during twenty years since they first began to bear, he has lost only one crop by frost.—*Cultivator.*

MODE OF INCREASING THE POTATOE CROP.—An English writer says, by carefully removing the buds as they appear on the potatoe vines, the crop of large ones is very much augmented. The theory is plausible, and worthy a fair trial.

AUGUSTA MARKET.

TUESDAY P. M., April 4.

Cotton—Since our report of last Tuesday, our market has assumed a little more activity, but as holders seem unwilling to accede to the demands of dealers for lower rates, a large business has not been done. We quote 3¾ to 6 cents as extremes of the market, though the major part of the sales are made at 4½ to 5¼ cents.

Business.—During the entire month of March, the weather was extremely unfavorable for business operations, which combined with the low price of cotton, have materially effected the spring trade, and our dealers complain that although their stocks are very fine the trade is very limited.

Exchange continues at par on Savannah, Charleston and all the Northern cities. Central Bank bills are sold at 28 ℔ cent discount. Alabama notes 20 @ 25 ℔ cent discount. State 6 per cent Bonds are in demand at 50 cents.—There are no transactions in the bills of other depreciated banks, as there is no confidence in any of them.

CONTENTS OF THIS NUMBER.

	PAGE.
Extract from H. Colman's Address	33
Comparative benefits of Manure turned under or spread on top; Hessian Fly; to wash Woolen Goods	35
Liebig's Animal Chemistry	36
Extracts from a Report on Horticulture; to destroy Bugs, Leaf Lice, &c; Extract from the Address of James Rankine; Rearing of Chickens; Candles	37
Editorials; to Eradicate Corns; Culture of the Sweet Potatoe	38
Cure for the Poll Evil; Lime in Agriculture; Home Improvement; Table showing the number of hills of Corn, &c. in an acre of ground; to kill Lice on Cattle	39
Tomatoes for Cows; Rouse's method of Spaying; to improve a Piny Old Field; Cement for Grafting; Mechanics; to Housewives; to destroy Red or Black Ants; Soak Seed Corn in Saltpetre; Peach Trees; Mode of increasing the Potatoe Crop; Augusta Market	40

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SOUTHERN CULTIVATOR.

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SUGAR FROM CORN.

We have received a great number of inquiries from different parts of our country, on the subject of manufacturing sugar from Indian corn, of which the following will embrace all the essential points, and to which we shall give as full a reply as the present condition of the manufacture will admit.

1. What is the best method of growing corn intended for making sugar?
2. Time of gathering and preparation for grinding?
3. Machinery for the manufacture?
4. Process of boiling, and granulation of the Sugar?

1. In planting corn for sugar, two objects must ue kept in view—the securing the greatest growth of stalks, and the prevention of the formation of ears. The kind of soil required for a great growth of corn, is so well known that it is unnecessary to describe it here. It must be rich, and should be friable, that it may be cultivated easily. A heavy clover lay, manured, and then turned over, rolled and the surface harrowed fine, makes a good soil for a corn crop. Mr. Webb, the most successful manufacturer of sugar thus far, directs that the corn be drilled in rows north and south, that the influence of the sun may be felt as much as possible, the rows to be two and a half feet apart, and the plants in the rows not more than two or three incher apart. This thick planting on a rich soil gives a great stand of corn, and in considerable degree prevents the formation of ears, as ears cannot be expected where the corn is as thick as is here directed. Mr. Blake of Indianapolis, made an extensive experiment last year, and from 4½ acres produced about 280 gallons of excellent molasses. He planted his corn, or rather drilled it in rows four feet apart, plants close set in the rows, but distance not stated.—It is probable in planting corn for sugar, something should depend on the variety selected; as it is evident the small northern kinds would requre closer planting than the tall southern or western kinds. We have not learned that any experiments have been instituted to test the comparative value of the several varieties of corn for sugar; though it is certain that large stalks yield more juice than small ones, in proportion to their size.

2. Theory indicated that a large portion of the sugar in the cornstalk would be lost, if ears were allowed to form; and experiments demonstrated that such was the case. When corn is planted thick no ears will form, or only small and imperfect ones. If ears form, they must be broken or cut off; not too early, as their tenderness greatly increases the labor required. Any time previous to the formation of the grain on the cob will be soon enough. When the stalk is fully matured, or ripe, the process of cutting off the tops or the blossom part, and stripping off the leaves, must be performed. The early northern kinds will be fit for stripping in August, the later kinds will continue to ripen until in September or October, or until killed by the frosts. The tops and blades must be secured for fodder, of which they make the best quality. When topped and stripped, the stalks are cut up by the bottom, close to the ground, bound in bundles, and taken to the mill for grinding. It is found by experience that the corn can be topped and stripped much more rapidly on the hill, than if cut up previous to those operations. If the tops and leaves are not taken off, a quantity of the juice will be lost, and the formation of sugar rendered more difficult.

3. The machinery required for the manufacture of cornstalk sugar is the same in effect as that used in making cane sugar. It was at first supposed that wood cylinders might be used for the corn stalk, instead of the iron ones requisite for the cane, and all the experiments hitherto made, have been in mills of this kind. Experience shows, however, that iron mills must be used, it requiring more hardness and firmness than wood possesses to operate successfully for any length of time. We give the figures of two mills for grinding corn or cane, one upright, and the other horizontal. The first (fig. 29,) is a figure of the mill used by Mr. Webb and others, the past season, and is of wood, worked by horses. The other mill is of iron, and may be worked by water, steam or horse power. Mr. Webb describes the first mill as follows: "It may be made with three upright wooden rollers, from 20 to 40 inches in length, turned so as to run true, and fitted into a strong frame work, consisting of two horizontal pieces, sustained by uprights. These pieces are morticed to admit wedges on each side of the pivots of the two outside rollers, by which their distances from the middle one may be regulated. The power is applied to the middle roller, and the others are moved from it by means of cogs. In grinding, the stalks pass through on the right side of the middle cylinder, and come in contact with a piece of wood work called the dumb returner, which directs them backwards, so that they pass through the rollers again on the left side of the middle one." The arms and braces used when the mill is worked by cattle or horses, are seen in the engraving. The iron mill does not differ greatly in principle from the wood one, except that the distance of the side rollers from the centre one is regulated by screws, as seen in the engraving, and that when propelled by animal power, the upper roller is turned by cogs at one end, moved by others on a vertical shaft. The iron mills are the most expensive in the outset, but they are the most durable, less liable to get out of order, and separate the juice from the stalk much more perfectly than the wood mill.—The experiments of Mr. Webb, the past season, from which so much was justly anticipated, failed in a great measure in consequence of his mill giving way on the second day of its use. Mr. Blake, whose well conducted experiment we have before noticed, used a wood mill, and found that a large part of the juice was lost, by the surface of the rollers soon becoming uneven, and not pressing the stalk properly. It is probable, therefore, that iron mills will be found the most economical in the end, and there is no necessity for their being very expensive. In both cases the rollers must move in or over reservoirs for the receiving the juice as it flows from the corn stalk.

4. We have not known, or heard of a single instance, where the attempt to manufacture sugar, or rather syrup from the juice, has failed.—The valuable report of Mr. Ellsworth, contains statements from all parts of the country, of the success which has attended the conversion of juice into syrup, but the instances were comparatively few in which the granulation of the syrup, or its conversion into sugar, was effected. In this, we apprehend, the greatest obstacle to the manufacture will be found. The simple fact, however, that such conversion has been repeatedly effected, shows there is nothing but experience and skill wanted to insure a result at all times. When the manufacture of beet root sugar first commenced in France, granulation of the syrup was almost impossible; now the process is as certain and effectual as in the case of the cane or maple. The great source of the difficulty seems to arise from the rapidity with which the juice passes into a state of partial fermentation, rendering its immediate reduction after extraction, indispensable. Beet root juice ferments immediately after it is pressed out, and it is said that in the West Indies, the purest cane juice will ferment in twenty minutes after it enters the receiver. Mr. Webb kept some corn juice for an hour without injury; but a great variety of experiments prove that it should be boiled as soon as possible. We give from a letter of Mr. Webb's, the following account of his process, because it is the result of practice rather than theory, he having made a beautiful sugar for two years by the process:

"The juice after coming from the mill, stood for a short time to deposit some of its coarser impurities. It was then poured off, and passed through a flannel strainer, to get rid of such matter as could be separated in that way. Lime water, called milk of lime, was then added in the proportion of one or two table spoonfulls to the gallon. It is said by sugar manufacturers, that knowledge on this point can only be acquired by experience; but I have never failed in making sugar from having too much or too little of the lime. A certain portion of this substance is doubtless necessary, and more or less than this will be injurious: but no precise directions can be given about it. The juice was then placed over the fire, and brought nearly to the boiling point, when it was carefully skimmed—taking care to complete this operation before boiling commenced. It was then boiled down rapidly, removing the scum as it rose.—The juice was examined from time to time, and if there was any appearance of feculent particles, which would not rise to the surface, it was again passed through the flannel strainer. In judging when the syrup is sufficiently boiled, a portion was taken between the thumb and finger, and if, when moderately cool, a thread half an inch long could be drawn, it was considered done, and poured into broad shallow vessels to crystalize. In some cases, crystalization commenced in twelve hours, in others not till after several days."

The following is a condensed view of the directions given by Prof. Mapes of New York, a gentleman who has paid much attention to the subject. The stalks (cane or corn) to be cut as ripe as possible, but before any acetic acid is formed; litmus paper will turn red if any acid is presented. Express the juice without loss of time, as every moment after cutting will deteriorate its quality. Clear lime water, one quart to 100 gallons of juice, to be added as soon as expressed, unless the juice shows acid with the litmus paper, when the lime is to be omitted, and a solution of sal. soda, or soda ash, added till it is precisely neutral. In this state, the juice must be evaporated in such an apparatus as to finish its change in 30 minutes. Unless boiled quick, good crystalization is not to be

expected. The time occupied from the cutting to the finishing the boiling, should not exceed one hour. To know when boiled enough, use Farenheit's thermometer; 239° or 240° is the proper point. The instant a charge is finished, it must be thrown into a cooler large enough to contain several charges. The second charge, and so for each one, must be mixed with the preceding, by gently stirring, but no more stirring should be used than is necessary, as it will be injurious. When all is boiled, let the mass cool to 175° and then fill the sugar molds, which should hold not less than 14 galls. There must be a plug at the bottom of the mould to allow the molasses to escape.

One of the most important steps in the process, and which is essential to the formation of sugar, is quick boiling. Long boiling renders the syrup dark, and prevents granulation. Mr. Webb, the last year, found it necessary to discard his former deep boilers, and substitute broad shallow vessels, in which the evaporation would proceed rapidly. The sugar made in this way is of a finer quality than that made by longer boiling, and crystalization is more perfect and certain. Syrup, however, made by quick boiling, as directed by Mr. Mapes, retains more of the peculiar taste of the corn stalk, than when boiled for a longer time. The sugar is free from this flavor, and Mr. Webb, to remove it from the molasses, recommends, after it is drained from the sugar, to dilute it with water, and boil it until this taste is lost. It is very probable, we think, that as the subject is farther investigated, and science is brought more efficiently to the aid of the manufacturer, that the little obstacles impeding his progress will disappear, as they have done in many other cases already.—Where failures in the formation of sugar have occurred, (every attempt to make molasses has succeeded,) they can easily be traced to the imperfections of the machinery, or the inexperience of the manufacturer, and will not be liable to again occur. There is scarcely room for doubt that a vast and profitable manufacture is opening upon the country, particularly the corn regions of the west and south; and there is every indication that the great importation of foreign sugars will soon cease, if not be changed to exportation.—*Albany Cultivator.*

[Accompanying the above article, in the Cultivator, were three engravings, representing—1st. The mill used by Mr. Webb; 2d. Side view of an iron mill; 3d. End view of an iron mill, which we regret we are unable to lay before our readers. —*Ed. South. Cult.*]

Soaking Corn to feed Horses.—One of the best farmers in the vicinity of Baltimore, saves one-third of his corn, by soaking it before he feeds it to his horses. He places two hogsheads in his cellar, secure from the frost, and fills them with ears of corn, and pours on water to cover it. When well soaked, he feeds it to his horses, and when one cask is empty, he fills it again and feeds from the other. By the time one is empty, the corn in the other is well soaked. The cobs are so well soaked that the horses eat the whole, and they require only two-thirds as much corn when prepared in this way, and there is no doubt that this preparation and the eating of the cob with the corn, renders the food more wholesome.—*Farmers' Journal.*

Keene's Marble Cement.—This is a combination of plaster of Paris (Sulphate of Lime) and alum. Common *boiled* plaster is steeped in a saturated solution of alum and then re-calcined and reduced to powder when it is fit for use. Although not capable of standing weather this substance is now attracting much notice from the beautiful stucco which it forms, resembling marble. It may be colored by simply mixing the color with the water used in applying it. The hardness of the substance and its beautiful polish, have brought it into use for interior decoration.

THE ORCHARD.

Notwithstanding we have said much in former numbers in reference to the orchard, still we think it a matter of so much importance to every one, that much more may be said with great propriety. Whether we are farmers, gardeners, lawyers, doctors, merchants, mechanics, or pursue any honest calling whatever, and keep house, we are certain to have a little land about us, which may be the means of giving us delicious fruit, by a little attention. A garden of half an acre, may be made to produce a sufficiency of vegetables for a small family, and quite a variety of fruit trees besides.

The situation best adapted to most kinds of fruit trees that will stand the winters in Tennessee, is a northern exposure. The only advantage in such a situation is, that the sun has less effect, and the north winds greater influence than on a southern exposure; and by this means the buds do not put forth so early and are not so liable to be injured by frosts. Peaches are said to do best on the margin of rivers and near water; but we presume the only advantage is the protection of the water from cold weather.—While on this subject it will not be inappropriate to remark, that old orchardists tell us, if earth or litter to the depth of three or four inches be thrown round fruit trees while the ground is frozen, the buds will be kept back till after danger is all over from cold. We are also told a wet hempen rope thrown over the tree on frosty nights will prevent any harm befalling the fruit. A high hill is not a bad situation for cherries, apples, pears, peaches, nectarines, quinces and apricots; on the most exposed north hill side, or a wall or fence protection from the sun, is the only location suitable for gooseberries, and is the best also for currants.

The soil most suitable, is a sandy loam, neither very rich nor very poor. A shallow substratum of rock or very tenacious clay will not answer.

The best time of transplanting for most trees is the spring. However, if trees were taken up in the fall and buried, or "heeled in," as gardeners would say, till spring, and put out, the management would be good. Every thing does best when it begins to grow immediately after being transplanted. Evergreens will do well only in the spring, or at least this is the writer's experience. There is danger of being loosened by winds, if put out in the fall, and the life of the tree seems to be wasting from the time it is planted till the sap starts, and it is safer to transplant a tree after the leaves start, if carefully managed, than if put out in autumn.

The proper mode of transplanting is, first to have pits dug from one to three feet deep, and not less than three feet in diameter, and if larger it will be better. Let the dirt be thrown out till the pit is the depth intended, then shovel in rich earth till the pit is filled within from eight to twelve inches of the surface in proportion to the length of the roots to be inserted. Then let a careful hand hold the tree. First see that it will be about an inch deeper when the pit is full than it grew. Spread all the roots, if possible, at full length; then let the earth be sprinkled on the roots till they are quite covered; the man holding the tree should shake it at the same time, that the earth may come in contact with all parts of the roots. When the roots have a couple of inches of earth, press with the foot gently all over the pit; then fill it till the ground is a little higher round the tree than it is at a foot or two's distance, that water may not settle at the roots and destroy the tree. The whole should be pressed with the foot. If manure is put in the pits, care should be taken that it is not too fresh and rank. Let it be well rotted, and if it is a compost of stable dung or leaf mould, with one third part of leeched ashes, it will be very good. The true system of manuring, is not to put it in immediate contact with the roots, but place it near the surface, and the tree will get all the benefits and run no risks of injury.

To make sure of getting the trees to live, a stake as high as the trees should be driven by each, and the trees made fast by a string.

The heading of the tree is an operation to which little attention is given by most persons, yet there is scarcely any thing more important to the judicious management of an orchard. By heading a tree, we mean that the branches should come out at a proper distance from the ground, and at regular distances from each other. For the sake of convenience in walking through an orchard, or cultivating it in any way, the branches should not grow on an apple, pear or peach tree, not less than from five to six feet from the ground. In making a head care should be taken that the tree does not fork or prong about equally, for when this is the case it will be apt to split down. There should be a main stem, and the branches should grow regularly one above another all around the main trunk. If young trees grow with a single stem, seven or eight feet before sending out a lateral, as is often to be seen, head it down or cut it off where it is desirable for the head to commence, and the branches will come out at the proper places.

By care, trees may be put in a shape that will give the orchard quite an ornamental appearance, and they will be full more beautiful and vigorous than when suffered to grow as circumstances may direct. It is also a matter of some moment in forming heads to trees, to notice that neither the larger nor smaller branches crowd together. An open head for good health and large, well riped fruit. Before closing these remarks, we must urge upon our readers the necessity and utility of selecting the best fruits of every kind. If those who wish to put out fruit trees, have not such as they want, let them apply to those who have, though the cost may be considerable. Indifferent trees, like noxious weeds, are a pest, but good fruit trees make the most punctual payments for all the land they occupy.—*Tenn. Agriculturist.*

PRUNING FRUIT TREES.

As pruning trees is confined to no particular season, some directions in the present number may be acceptable.

The first thing necessary is a good sharp knife, which is not always at hand.

The second object is to ascertain what part must be cut away, and what should remain.—To be capable of this requires a knowledge of fruit growing, in general, and vegetable physiology and the nature of each kind of tree, in particular. The operator should examine if any of the branches come out too low, and if there are any inclining, or crowding the better proportioned parts of the tree. Such should be taken off. There is said to be more danger in leaving the tree with too much than with too little wood.

With large branches a small saw should be used, and if the operator will use a smoothing plane to leave the wound perfectly free from bruises and rough places made by the saw, the healing may be expected much sooner. In pruning small trees, let one foot be placed near the root, then hold in the left hand firmly the branch to be cut, insert the knife close to the body of the tree, and if possible let the work be done by one smooth cut. The closer to the body of the tree the cut is made the better. Limbs cut at a half inch or inch from the trunk, must rot away, or the tree must become much larger before the healing can be effected, and in the mean time these wounds are most liable to produce serious diseases.

There is much dispute about the proper time of pruning. While some urge the winter or spring the only suitable time, others with as much vehemence, and indeed argument, argue for exclusive summer pruning. From our knowledge of the subject, we have no idea either system is wholly true. Any one who has had a little experience will see, even in the absence of philosophy, that branches cut away in the summer, heal over sooner than if the pruning be done at any other time; and he will also see, there are not a few young shoots which come

out in the summer, which are not needed, and should be cut off before they take the nourishment from the better parts of the tree. On the other hand, there are often awkward and unnecessary branches found on the tree in the winter, and even parts of the tree killed or much injured by the severe cold of winter; and this shows the absolute necessity of spring pruning. To conclude the subject, the writer has no doubt the pruning should commence in the latter part of the winter, or early in the spring, and continue as circumstances suggest through the whole growing season. If either spring or summer pruning be neglected, the trees cannot look so well or do so well.—*Tenn. Agriculturist.*

PRUNING FRUIT TREES.—It will be found upon experiment, that a wound made on a tree in March or April, will look black as soon as the sap begins to flow, and that the sap will ooze out until the leaves have put out so as to receive it; while a wound made in June, will remain white and immediately commence healing.—And a tree that has been broken by being loaded with fruit, or otherwise, while the tree is green with foliage, the wound will look white and the wood remain sound; while one broken in the winter by snow, or from any other cause, will look black and decline to decay.

It has been my humble lot to spend the most of my time in the spring and fore part of the summer in engrafting and pruning fruit trees, and my experience goes to prove that the best time for pruning is when the leaves are full grown, and the tree is vigorous and in a growing state. For at this season the sap has been spent in the foliage, and the pores of the wood are filled, so that when the limb is taken off, the sun and warm weather will dry the end of the limb and close the pores of the wood against the weather, and the sap will keep the limb alive to the very end, and the healing will be perceived immediately.—*Boston Cultivator.*

TO PROTECT FRUIT FROM LATE SPRING FROST.

The following article appeared in the "American Farmer" last spring, and attracted our attention on account of its novelty and ingenuity. Since that period, we have seen a gentleman who assures us he had tried the preventive recommended with the most entire succes. It is at least curious, and for the preservation of the fruit of a particular and favorite tree, might be esteemed useful.—*Southern Planter.*

"Many expedients have been resorted to for the protection of fruit from the blighting influence of late frosts. Throwing a sheet over the tree, hanging iron upon it, kindling a fire under it, &c. have each been found to have a beneficial influence, but none have been more efficient than the experiment which I am about to describe.

"My friend, Major Ruff, who is a virtuoso, lately informed me that many years ago he saw it stated in a French paper that by throwing a hempen rope over the top of a fruit tree, when in bloom or near the time of blooming, and by letting its lower end touch the ground, the tree would thus be protected from the influence of frost. This I thought quite rational and philosophic, I accordingly made the experiment. To prove more fully the *modus operandi*, I took two dishes half filled with water, and set them a few feet distant under the tree, on the night before an expected frost, the tree being nearly in full bloom. Throwing the rope over the top of the tree I let the other end hang in the water of one of the dishes—the event proved the correctness of the theory. There was a hard frost on the morning and the dish into which the rope was deposited, contained ice of the thickness of a dollar, while that in the other dish was scarcely of the thickness of paper.

"The philosophy of the above experiment is this: the rope, which was previously wetted, was a conductor of heat; the air, and of course the limbs of the tree, became *colder* in the night than the earth—the rope conducted the heat from the earth to the tree, thus keeping up an equilibrium and preserving the tree from frost.

"As far as my observation extends, the critical time for fruit is long before it is in blossom: but it is nevertheless true, that severe and protracted cold at that time, or even later, will destroy the fruit. This was the case last year.—The fruit was killed by severe frost after it had been formed.

"There is not in my mind a doubt that by attaching a rope to each tree of choice fruit, and thus letting it permanently remain through the winter and spring, that the fruit would be secured from the effects of frost.

"To the incredulous and the supercilious, who balance their grist all their lives with a big stone—who, sufficiently wise, despise knowledge and instruction, the above may appear unworthy their attention. Let such be informed that it is not less philosophic than lightning rods attached to buildings to protect them from the influence of electricity—let them be informed that

"There are more things in heaven and earth
Than their philosophy has ever dreamed of."

EXTRACT FROM H. COLMAN'S ADDRESS.

Of all the conditions of men, and I have mingled with every variety, I believe in truth that none is so independent as that of an industrious, frugal and sober farmer—none affords more the means of contentment and substantial enjoyment—none, where the education has not been neglected, presents better opportunities for moral and intellectual improvement—none calls more loudly for religious gratitude—none is suited to give a more lively and deeper impression of the goodness of God. Some years since, in the most rugged parts of New Hampshire, among its craggy cliffs and rude and bold mountains, I was travelling on horseback, and came suddenly upon a plain and moss-covered cottage in the very bosom of a valley, where the brave settler had planted himself on a few acres of land which alone seemed capable of cultivation. Every thing about the residence bespoke industry and care. Being fatigued, I stopped to ask refreshments for my horse. A hale young girl of about fifteen, bareheaded and barefooted, but perfectly modest and courteous, with all the ruddiness of Hebe, and all the nimbleness and vigor of Diana, went immediately for an armful of hay and a measure of oats for my horse; and then kindly spread a table with a cloth as white as the snow-drift, and a bowl of pure milk and brown bread for his rider. I never enjoyed a meal more. I offered the family pay for their hospitality, but they steadily refused, saying that I was welcome. I was not willing thus to tax their kindness, and therefore took out a piece of money to give to one of the children that stood near. "No," said the parents, "he must not take it: we have no use for money here." "Heaven be praised," said I, "that I have found a people without avarice. I will not corrupt you;" and giving them a hearty thank-offering, wished them God's blessing, and took my leave. Now here were these humble people, with a home which, if it were burned down to-day, their neighbors would rebuild for them to-morrow—with clothing made from their own flocks by their own hands—with bread enough, and beef, pork, butter, cheese, milk, poultry, eggs, &c., in abundance, a good school for six months in the year, where their children probably learned more, because they knew the value of time, than those who were driven to school every day in the week and every week in the year—with a plain religious meeting on Sunday, where, without ostentation or parade, they met their neighbors to gather the gossip of the neighborhood, to exchange friendly salutations, to hear words of good moral counsel, and to worship God in the most simple but not the less acceptable form—and, above all, here were hearts at peace with the world and with each other, full of hospitality to the passing stranger, uncankered by avarice, and undisturbed by ambition. Where upon earth, in a humble condition or in any condition, shall we look for a more beautiful example of true independence, for a brighter picture of the true philosophy of life?

AGRICULTURAL SCHOOLS.

The subject of directing the education of youth to agricultural pursuits, in order to introduce a more enlightened system of agriculture, is beginning to attract considerable attention in some of the States. In Virginia, particularly, we notice much has been said and written on the subject by some of her most distinguished and intelligent men. Among others, the editor of the Richmond Enquirer has taken the field in defence of such a system of education, and the following letter, from Gen. W. H. Richardson, ably and vigorously seconds his views.

"Not having time to call on you this morning, I write to express my hearty concurrence in the suggestions thrown out in this morning's Enquirer, under the head of agriculture.

"My consideration of the subject, as you may well suppose, has not been very profound, and I am sensible that the conclusions to which it has led, are very far from being entitled to much weight. I have long admired the plan of the celebrated Fellenburg, to which you refer; and hough, as I still think, that one such school would be worth more than all the professorships of agriculture that could be established in our colleges. If the agricultural portion of our people could be awakened to their true interests, one such school at least could be established in each of the grand divisions of the State and sustained by individual subscriptions. Or, if not effected in this mode, and the financial condition of the State should not admit of the requisite aid from the public treasury, might not a tax be laid for that special purpose? It is difficult to estimate the advantages that might justly be expected from agricultural schools, in which theory and practice would go hand in hand, and where the mental as well as physical powers were judiciously cultivated. We all know, that the few landed estates which are yet left to be transmitted from fathers to sons, most frequently fall into the hands of young men just from college, who, though they may be fine scholars and qualified to attain the highest professional rank, are yet profoundly ignorant of that which it most concerns them to know—practical agriculture. So, too, of the least wealthy portion of our people, who train their sons to the labors of the farm, but most frequently in the same path which has been trodden by fathers, grandfathers and great-grandfathers before them, but upon which no one ray of improvement has yet been shed. These young men are, according to circumstances, either portioned off with small farms, or seek employment as overseers, having, generally, little else than habits of industry, with true and honest hearts, to qualify them for the business of life. It is easy to conceive, that to all these the education of an agricultural school would be certain independence, if not wealth.

"The want of sufficient skill in agriculture and farm management among overseers, we hear complained of by almost every farmer who employs one. It is a serious grievance; but the poor fellows themselves are not to blame, for they have no chance of better information. A case lately came to my knowledge of a lady, possessed of a good estate in land and negroes, who had been repeatedly disappointed in overseers, and at length employed one whose known industry and integrity it was hoped would suffice. But with a full stock of these indispensable qualifications, and every wish to give satisfaction, he proved so utterly ignorant of farm management, and of any standard of agriculture beyond that with which he had grown up—between the handles of an old style one-horse plough, with a wooden mould board, and rope traces—that his employer has a certain prospect of loss upon the year's work, and he of losing his place. An experienced and observant farmer lately remarked in my presence, that many who were now struggling in the over-filled professions, and the uncertain risks of commercial

pursuits, must soon find themselves driven to agriculture for a subsistence; and that, instead of every man who can command the means, sending his sons to fill the classical schools of the day, uncertain what they must do when they attain to manhood, they should be (or a large majority of them) trained in schools of agriculture, which the public voice should compel the Legislature to establish.

"Agricultural schools should be alike accessible to rich and poor, and in the vicinity of flourishing towns, might, as you have suggested, to a considerable extent, support themselves. To the rich they would be scarcely less valuable than to the poor; as the first would be taught how to improve and preserve his inheritance, whilst the last would learn how to acquire independence for himself and an inheritance for his children. Many farmers are most anxious to give their sons such an education; and even among the poorest and most ignorant, scarcely one could be found who would not cheerfully surrender the labor of his son for the advantage of placing him in an agricultural school. A very poor, but most respectable man applied to me early this year to take his son, a stout youth of sixteen, for five years, stating that he wished to make him a farmer—not to expose him to the vices of a town life—that he had nothing more to give him than he had already given, a plain English education—and as he hoped, good principles and good habits. It was not in my power to take the youth, and especially because I knew myself to be incompetent to teach him what his father wished him to acquire. Now, the labor of his son was worth something to the father, (a feeble man,) but he was most willing and anxious to give that up, and even to permit him to labor on my farm with my negroes, for the advantage he supposed would be derived from my instruction. It was an over-estimate of my qualifications—but serves to show the infinite importance to a large majority of our people, of agricultural schools.

"The press is the most powerful engine that can be brought to bear upon this important subject. I rejoice that you have taken it up, and hope that it will be pressed with your accustomed zeal. * * * * I trust too, that it will be taken up by the press universally. Half the devotion to this great cause, that the political press bestows upon the party politics of the day, would do more for the best interests of Virginia, I verily believe, than any thing besides. Our Society, there can be no doubt, will do its part.

"This is not written for publication. I am not qualified to discuss the subject in the public prints, and therefore, do not wish to appear vain enough to attempt it. Abler pens and more distinguished names than mine must do the work; and it is time that work was in hand.—Let the word be onward."

Industry.—Every young man should remember that the world always has and always will honor industry. The vulgar and useless idler whose energies of mind and body are rusting for want of exercise—the mistaken being who pursues amusement as a relief to his enervated muscles, or engages in exercises that produce no useful end, may look with scorn on the smutty laborer engaged in his toil. But his scorn is praise. His contempt is an honor. Honest industry will secure the respect of the wise and good among men, and yield the rich fruit of an easy conscience, and give that hearty self respect which is above all price.

Toil on then young men. Be diligent in business. Improve the heart and the mind and you will find the well-spring of enjoyment in your own souls, and secure the confidence and respect of all those whose respect is worth an effort to obtain.

Scours in Calves.—We have never, says the editor of the Southerd Planter, found any remedy for the scours preferable to boiled skimmed milk. This should be given warm, and it is more safe than poisons of any kind.

DUTIES OF FARMERS.

Among the many duties which devolve upon farmers, there is none of higher importance or to which is attached a greater share of responsibility, than that of affording to the rising generation the means of instruction, and the facilities for cultivating the mind. It is in vain we talk of improving the soil and elevating the standard of agriculture in this country, while the youth, the sons and daughters of farmers, are denied the privileges of education and moral culture, which every sound and thinking mind will admit are necessary to enable them to pursue their avocations with pleasure and profit, and to discharge in a proper manner their duty in the various relations of life.

The subject of education in schools is of vast importance to farmers, and may with propriety be discussed in an agricultural journal; but we intend in this article only to point out some of the errors and omissions of duty with which many farmers are chargeable in the education and training of those who are soon to enter upon the stage of action, and to whom the agricultural interest must look for its friends and advocates. Education does not consist solely in the knowledge gained at schools. The history of some of our most eminent men shows that individual exertion, when aided and encouraged by parental advice and aid, may be the means of acquiring a degree of knowledge and of reaching a position which the mere advantages of school could never afford. We here repeat, what we have often in effect said, that self-culture is more neglected among farmers than any other class of persons. It is time that there was a reform in this respect, and we are happy in being able to say that there is evidence of its commencement, in the desire of agricultural reading, which pervades to some extent the youth of this country. It is the duty of those having the care of youth, so to encourage the first appearance of these desires, as to form permanent habits, and a disposition for investigation, which always leads to valuable results.—That father who, when his son discovers evidences of a fondness for agricultural pursuits, and an inclination to store his mind with that information which may be derived from the experience and writings of others, withholds the means of gratifying these inclinations, places himself in an unenviable position and can blame no one but himself, if his son does not pursue that course of conduct which he could desire.—The youthful mind is never inactive, and if it is thwarted from its laudable inclination, will be very likely to engage in the pursuit of objects which it would be wiser to avoid. There is no subject on which the mind of young men can with more propriety be employed than in the improvement of agriculture, and we think the judgment of our readers will coincide with ours, when we say that the surest means of leading the mind to an investigation of agricultural science, and the best means of accomplishing objects or improvement, is to place before them publications which have for their aim the good of agricultural interest. Often have we heard the boy of twelve or fifteen years, urge his father to subscribe for an agricultural paper, which could be had for fifty cents or a dollar a year, promising to read it attentively, and in some instances to work out and earn the subscription money, while the father would utterly refuse to allow him the privilege of storing his mind with information, which might be the means of adding greatly to his usefulness, and prevent him from acquiring habits of dissipation and idleness. And why is this refused? Simply because it will cost a few shillings a year, while as many dollars would perhaps be freely expended on objects which can be of no possible advantage to the youthful mind. There are hundreds of such cases even in this enlightened community, and we wish in a respectful manner to call the attention of such individuals to the subject, and to show them the nature of the responsibility which they have thus voluntarily assumed. If we would elevate the character of the farmer, we must enlist the feelings of the youth, thus enabling them well to act their part in the duties to which they will be called. Were is the man who is willing to stand in the way of improvement, by keeping as far as his influence goes, the sons and daughters of farmers, ignorant of the means of improvement which shall be extended to them in their youth. Every opportunity should be embraced to impress upon young persons the advantages, as well as the respectability of agricultural pursuits.

When we hear a young lady, and the daughter of a farmer, say with an air of confidence that she cares nothing for the interests of agriculture, and that she feels far greater interest in attending balls, and dancing schools, than in reading publications devoted to the improvement of the business in which her parents have obtained an honest living, and perhaps amassed a fortune, we generally conclude that although the parents may know very well how to take care of dollars and cents, they must have neglected the education of their children, and are accountable for a violation of duty not only to their family, but to the circle in which the children are to move. We have heard young ladies openly avow the above sentiments, and have felt pained on accouut of their ignorance, while they supposed themselves well informed and well educated. We are happy, however, to say that a very great portion of the females among the agricultural portion of the community, exert all their influence in favor of rural pursuits, and that much of the spirit of improvement, which is now every where witnessed, as well as a great proportion of the interest which is manifested in agricultural exhibitions, may be fairly attributed to the influence of females. Let fathers and mothers discharge their duty in a proper manner, and educate their children so as to encourage rather than repress a fondness for agricultural pursuits, and the time will soon come when agriculture, instead of being looked upon with disdain, will engage the attention of the young and hold a high place among the occupations of life.

It is too often the case in this country, that young men instead of relying on their own powers of mind to investigate the different and varied subjects connected with agricultural pursuits, rely solely on the knowledge which their father can impart, and never dream of turning aside from the track which others have pursued before them.

We recollect on one occasion meeting with a farmer whom we invited to subscribe to our journal, and inquiring the price and the objects of the paper, he inquired of his son, a young man of perhaps sixteen or eighteen years, if he would like to have an agricultural paper, to which he replied that he wanted a paper that had funny stories in it. On our remarking that a knowledge of agricultural pursuits was of far greater consequence to a young man than a perusal of funny stories, he very promptly answered, "I can learn enough about farming from dad." We fear that this opinion is far too prevalent among the sons of farmers in this country, and that they rely more on Dad than on their own exertions. We ask farmers, and the friends of agriculture, to think of these things, and see whether their duty does not require that they place within the reach of the youth in their charge, information which shall enable them not only to make a proper choice of business, but which will qualify them for the proper discharge of the business of their choice.

Central New York Farmer.

Lice on Fowls.—In your October number, I observed some remarks on using sulphur to destroy lice on fowls. This I have tried in former years with entire success. Mixed with Indian meal and water, and fed in the proportion of 1 lb. of sulphur to 2 doz. fowls, in two parcels, a few days apart, I have found that it would soon exterminate the lice, and produce a remarkably healthy and glossy appearance in the fowls. They should at the same time be supplied with proper dusting places.—*Alb. Cult.*

FARMING WITHOUT RUM.

Whoever commenced the Temperance Reformation, was, in truth, a benefactor to the human race. From the highways and byways, from the borders of the abyss of degradation, if not from the depth of the abyss itself, thousands will rise up to call that man blessed, who has saved them from themselves. Great as are the talents of O'Connell, there is an unpretending priest, who is at the present moment doing more to elevate, disenthrall, and regenerate Ireland, than a thousand O'Connells, without his aid, could have done. Wherever Father Matthew goes, the distilleries become useless, the pig gets an extra quantity of corn, the wife a new dress, and the laborer sheds his rags for a new coat, saved from earnings that formerly went to brutalize and impoverish himself and family.—Scarcely less striking has been the result of abstaining from the common use of ardent spirits in the United States, and in no department of industry has this influence been more beneficially felt than in that of agriculture. Of this no one doubts, we believe, who has made the experiment of *farming without rum*, or in other words, banished ardent spirits from his farming operations.

We are well aware that there were thousands, in fact nearly every farmer in the country, who when the idea of farming without the use of ardent spirits was first proposed, deemed it wild and visionary, if not impossible. So intimate had the associations of work and rum become in the minds of most men, that to separate them —to undertake to break in upon long established usage—to get in a harvest, or erect a building, without such drinks, required no little exercise of reason and independence of feeling.—Many who were convinced the practice was useless, hesitated about abolishing it, least the withholding spirits should be charged to a penurious disposition. Good sense, however, and a feeling of right prevailed; rum was banished from the harvest field and the raising, in numerous instances, and it was found that none of the injurious effects anticipated by many, followed. There was no want of laborers; the coarse grains still commanded good prices; and four or five distilleries in every town ceased to produce and distribute misery and death.

In those neighborhoods, and on those farms from which intoxicating drinks have been banished, those revolting scenes unfortunately once too common, are now no longer seen. We remember when it was the custom to find each laborer in the harvest field with his pint of spirits daily, that there was frequently more waste from the effects of the drink than their labor cost. We have seen in the harvest field by the middle of the afternoon, the reaper so *blue* that he was as likely to cut his own fingers as the grain, and compelled to resort to a corner of the fence and a nap, to restore a capacity to work. We have seen half a dozen cradlers raeing it through a wheatfield like madmen, yelping and yelling like savages, throwing the grain behind them without care or thought, and causing a waste greater than as many swine would have done, even if they had been of the most approved alligator breed. We have seen a dozen men reeling home from a raising to sleep away the liquor that had stolen away their reason, or, as was most likely, to abuse their wives and children. Now, where temperance principles prevail, such scenes are never witnessed: and their influence can be traced in the mitigation of these evils, even where they are not yet fully triumphant.

The proper source of ability to labor is found in food; this alone nourishes and confers strength. Ardent spirits give no nourishment; they only stimulate; and experience proves, that all expenditure of power, not based on the true source of supply, can only be temporary, and must produce results the more injurious to the individual. The correct course, then, is to substitute the nutritious for the stimulant, healthful for the injurious, habits that too frequently end in ruin for those that are certainly safe and honorable.

If there is a single reader of the Cultivator, who has never made a trial of farming without rum, we ask him as a friend to make it thoroughly the present season, and then to judge for himself. The experiment is not now an untried and hazardous one; it encounters no opposing public opinion, nor subjects the farmer to the charge of eccentricity or niggardliness; and it is not one which might once have been considered as tampering with the health of the workingman. The man who labors must have food in abundance, and of the best kind; he must have drink too, but this should not be ardent spirit.—*Albany Cultivator.*

CULTIVATION OF CORN.

The Nashville Agriculturist gives the following directions for the cultivation of Indian corn The editor says:

"It is scarcely probable that we or others have learned all, or half, that is important in the cultivation of this crop, and therefore we can only promise imperfect directions; but such, if carefully adhered to, will be useful to most farmers."

1. *Preparation of Land.*—The richer the soil the better for corn; and if it be not rich, stable manure is the best remedy: indeed, any kind of decayed vegetable or animal matter will show as much in this crop as any other. The land should be broken as deep as possible—if from ten to twenty inches, so much the better. Stubble, grass, weeds and all kinds of litter should be turned under. If this can be done sufficiently early to let the frosts have their influence in pulverizing the clay and compact portions of the earth, it will be better. A good plan is to break the land, by throwing into beds from four to six feet asunder, in proportion to its strength. On this plan the beds for the roots are more certain to be light and open; and the best proof that this is a good system is, those who commence rarely abandon it.

2. *Time of Planting.*—So far as our experience goes, the earlier corn can be made to grow, the more certain is the crop. Generally there is a drought early in the summer which cuts the crop short; and the only sure remedy is to plant early. March planting, nine times out of ten, is the surest plan for the latitude of Tennessee, though occasionally good crops are raised, planted in April and even May.

3. *Manner of Planting.*—If the land has been thrown into ridges, a bull tongue, or a shovel plough in the centre of the ridge, drill the corn and cover it with a light harrow. If the land is broken with a level surface, it is a good plan to run a turning plough as deep as possible, and in this furrow run a coulter or other small plough, to make a soft bed for the young roots. These rows might be from four to five feet apart, in proportion to the strength of the soil. Cross these furrows at the same distance, but run the plough as shallow as possible. Drop the corn at the crosses, and cover with a hoe, light plough or harrow, to the depth of from one to three inches.

4. *After Culture.*—So soon as the young plants show themselves, run a cultivator near them to stir the soil and destroy the small weeds. If the land is now stirred every week, with a harrow, cultivator light plough, to keep down weeds and render the land open for the free access of the atmosphere, the crop will certainly be good.—Every one should be sure to thin out early.—Whether the land should ever after planting receive a deep ploughing, depends solely upon circumstances. If the land has run together from heavy rains, it should be ploughed—not otherwise.

MAKING MANURE.—Asa Barton, in the Maine Farmer, says that he converted straw, corn stalks and potatoe tops into good manure in 14 days, in the spring of 1841, only by heaping them together, and mixing unslacked lime with them. He used six casks of lime, and had fifty loads of good manure. The loads were such as farmers carry, a large half cord to the load.

MILKING COWS.

The owners of cows should pay particular attention to milking. Children must not be trusted with this business, and there are many grown people who never milk well though they have been brought up to the business.

If you would obtain all the milk from the cow, you must treat her with the utmost gentleness; she must not stand trembling under your blows nor under your threats. She may at times need a little chastisement, but at such times you need not expect all her milk.

Soon after the bag has been brushed by your hand and the ends of the teats have been moistened a little with milk, it flows in rapidly, and all the veins or ducts near the teats are completely filled. Then it must be drawn out immediately or you will not get the whole. You must not sit and talk—you must not delay one moment if you would have all the cow is then ready to yield.

The udder should be moved in every direction at the close of milking, and the hands may beat it a little in imitation of the beating which the calf gives it when he is sucking. An expert milker will make the cow give one quarter more in butter, than a majority of grown milkers will.

One season, at Framingham, we kept four cows in the home lot; there was but little difference in the quantity of milk given by each. We had a *very steady* hired man of forty years of age; he had carried on a farm in New Hampshire and always been used to milking; but he was so slow the cows had no patience with him.

We milked two of the cows and he the other two, and we were but little more than half as long as he in milking, though we got the largest mess by about one quart. On our remonstrating that he did not draw out all the milk, he said his cows would not yield so much as those milked by us. We then made an exchange: he milked our two and we milked his. In three weeks time the case was reversed; our mess exceeding his by nearly one quart. He never failed to strip his cows to the last drop; but his *intolerable moderation* prevented his obtaining what an active milker would have done.

Young learners may practice on cows that are to be soon dried off. They should be taught *at first* how to take hold of the teats and they will remember it; but how common it is to let each child choose his own mode of milking! Learners should know that the hand should be kept very near the extremity of the teat, if they would milk with ease. The left arm should always press gently against the leg of the cow; for if she is inclined to kick, she cannot with any force; she cannot *strike* an object that leans against her; but if she raises up her foot, as she often will when her teats are sore, the milker will be ready to ward off and keep it from the pail much better than when he sits far off from the cow.

If heifers are made tame and gentle by frequent handling when they are young, they are not apt to kick the milker; their udders should be rubbed gently before calving; it is quite as grateful to them as carding. But if they are suffered to run wild till after they have calved, they cannot be expected to be gentle when you first attempt to milk them. They often acquire bad habits and are not broken of them through life.—*Mass. Ploughman.*

PRESERVATION OF HEALTH.—An ancient philosopher once said, "If you find it necessary to have recourse to medicines, there are three which you can make use of with safety, viz: a tranquil mind, moderate exercise, and temperate diet."

The celebrated French physician, Dumoulin, on his death-bed, when surrounded by the most distinguished physicians of Paris, who regretted the loss which the profession would sustain in his death, said: "My friends, I leave behind me three physicians much greater than myself." Being pressed to name them, each of the doctors supposing himself to be one of the three, he answered, "water, exercise, and diet."

PROGNOSTICS OF THE WEATHER.

PROGNOSTICS FURNISHED BY THE HEAVENLY BODIES.

1. *Observations of the Sun—Signs of the Wind.*—The sun rises pale and remains red; his disc is very large; he appears with a red sky at the north; he maintains the color of blood; he remains pale, with one or more obscure circles or red rays; he appears concave or hollow. When the sun seems divided or is accompanied by a parhelion, it indicates a great storm.

Signs of Rain.—The sun is obscure and as it were bathed in water; he rises red, or with black stripes mingled with his rays, or becomes blackish; he is placed above a thick cloud; he rises surrounded with a red sky in the east. Sudden rains are never long; but when the sky is changed gradually, and the sun, moon and stars are obscured by little and little, it rains generally for six hours.

Signs of Fair Weather.—The sun rises clear, and the sky has been so during the night; the clouds which surround him at his rising take their course to the west, or indeed he is environed by a circle, provided that the circle is at equal distances on all sides; then we may expect weather constantly fair; he sets amidst red clouds, whence this popular saying, that "*a red evening and a gray morning are sure signs of a fair day.*"

2. *Observations of the Moon.—Signs of the Wind.*—The moon appears very large; she puts on a reddish color; her horns are pointed and blackish; she is surrounded by a distinct and reddish circle. If the circle is double or broken it is the sign of a tempest. At the new moon there is often a change of wind.

Signs of Rain.—Her disc is pale; the extremeties of her crescent is blunted. The circle around the moon attended by a south wind *portends rain the next day.* When the wind is south and the moon is visible only the fourth night, it portends much rain for the month.

Signs of the Weather.—The spots on the moon are very visible; a brilliant circle surrounds her when full. If her horns are sharp the fourth day, it will be fair till the full moon. Her discovery brilliant three days before the change or the full moon, always denote fair weather. After each new and full moon, there is often rain followed by fair weather.

3. *Observations of the Stars.—Signs of Rain.*—They sppear large and pale; their twinkling is imperceptible, or they are encircled. In summer when the wind blows from the east and the stars appear larger than usual, then look out for sudden rain.

Signs of Fair Weather and Cold.—The stars appear in great numbers, are brilliant and sparkle with the brightest lustre.

From the Farm House of the XIXth Century.

THE ROLLER.

From several years experience, I am fully satisfied the roller is an indispensable to good farming; and yet, I am as fully convinced, if not used judiciously, it will do much injury. There are but few rules necessary to be understood to construct a roller. Those made of iron, of course, are best; but as economy is a part of the farmers study, a wooden one will answer all the uses of the husbandman.

Take a stick of wood six feet long, and big enough to make a cylinder two feet in diameter; bore a hole through, and pass a bar of iron, to serve as an axel and support the frame work for hitching horses. If the roller be cut into two pieces, each three feet long, there will be no dragging in turning, and the seeds will come up more regularly at the ends of the lands. Almost any common carpenter or wagon maker might prepare a roller in a short time.

USES.—The roller is valuable on light sandy land; also it is admirable for breaking clods, will cause oats, wheat and all small grain crops to come up better, leaves the land smoothe and pleasant for reaping, and it is the best instrument for running over wheat tn the spring which has been frozen out. But if the roller is used on clay, particularly when a little wet, the ground will become packed so closely, that more than a season's ploughing will be required to become at all free and open. In conclusion, we must remind the inexperienced to be cautious, or they will regret that they ever saw a roller.

Tennessee Agriculturist.

METHOD OF CAUSING CABBAGES TO HEAD DURING THE WINTER.

In the fall of the year when it is time to gather cabbages, we always find more or less of them that have not formed any heads. They may have grown well, and have a large stock of leaves, but have not closed up in the form necessary to make a good, solid, compact cabbage.

William Vance, Esq. of Readfield, has practiced for many years the following method, which effectually closes these loose leaves in the course of the winter, thereby furnishing him with a supply of the best kind early in the spring. In the fall of the year, just before the ground closes up he gathers all the cabbages which have not headed together. He then digs a trench eighteen inches or more deep, and of sufficient width to admit the cabbages. He then closes the leaves together by hand, winding a wisp of straw or somothing else around them to keep them together, and then puts them in this trench, with heads down and roots up. He then packs straw or leaves and earth snug about them, and rounds up the earth over them. The trench should be dug in a place where the water of the rains and snows run off and will not stand about them. A board, or couple of boards, nailed together in the form of a roof and put over the mound, may be useful.

In the spring of the year open your trench and you will find that the cabbages are all headed firmly together, and if the water has not got in, will be solid and hard. Mr. Vance has had the goodness to send us a few heads which he has formed in this way, which were very nice. By following this plan, we not only preserve the cabbages well during the winter, but save much of the crop which is not considered worth much.

Maine Farmer.

CULTURE OF THE STRAWBERRY.

I early turned my attention to Horticulture, and in one department of that, the cultivation of strawberries, I think I can show by facts that I have been truly successful. I have not failed to have a good crop every year, for ten years; and last year, from 1371 plants only a year old, I sold eighty gallons, besides what was consumed in my family, and some choice parcels, perhaps from vanity, sent as presents to my friends. My garden is a light loam, nearly level, but high and dry, not remarkably rich, it having been taken from a wheat field and enclosed the year before.

My mode of cultivation is to set out the plants or runners at equal distances of 18 inches, and if planted in the spring, keep them constantly worked and the runners off. This may be done with a garden scraper, quickly and neatly. In the month of November, if the season does not set in cold sooner, I manure with well rotted manure and work it in, putting my beds in nice order. I then cover them about one or two inches deep with pine shatters, (having an abundance of them,) straw, chaff—perhaps tanner's bark would do as well, though I object to the chaff because it has more or less wheat, which will vegetate, and give your beds an unsightly appearance. Having made my servants work the shatters under the vines, they stay on until the strawberries are done bearing. In this way the vines are kept warm in winter, the grass and weeds do not spring up, and the fruit is so clean when gathered, that there is no necessity of washing, &c. I make no alleys in my beds, my ground being porous and dry. If I plant in the spring, I deem it advisable to renew my beds after the second year's bearing. This is done by simply directing the runners to the centre of the square formed by the old vines, throwing over the tendril of the runner a little earth, to keep it in place, and when the runner has taken root, sever it from the parent vine. Then with a hoe, for the space will admit it, cut out the old vines. The manure which the ground has received in two years, will put it in fine order, and thus the bed may be kept up for years. I intend to try plaster on my vines this spring. I sold my strawberries for 50 cents a gallon, throughout the season, in our village market, and could not gratify the demand. I omitted to state that the 1371 plants grew on a comparatively small area, as any one may see by calculating it. I then had four beds. I now have twelve, and in every bed the plants look beautiful, scarcely one missing. I have but very few male plants, though it was by accident.

BRICE J. GOLDSBOROUGH.

Albany Cultivator.

VALUE OF SEASONING FIRE-WOOD, &c.

We make the following extract, says the Southern Planter, from a letter received from Mr. George W. Craven, of Albemarle.

"Perhaps, gentlemen, I can throw out a useful hint (whilst I sit by a cheerful *seasoned* wood fire,) on the importance, comfort and saving of labor by having seasoned wood instead of green. In the first place, it does not require more than half the labor to load and unload, and half the labor to haul, which is no small consideration. And then half the quantity of seasoned wood makes as good a fire; for two or three sticks of seasoned wood makes a good fire, and you get the benefit of the whole of it, as none goes off in smoke to make foul chimneys. For smoke is nothing more nor less than unconsumed fuel. Therefore, I would advise all farmers to cut their fuel the winter before it is used; split and set it up. If for market, no one that considers comfort and economy will object to it because it is seasoned. It is a fact, that any wood, when seasoned, makes a good fire, whereas, there are many kinds of green wood that make an intolerable one. For instance, pine wood green will scarcely burn at all—when seasoned, it makes a respectable fire. All kinds of timber are better for being seasoned. If farmers would cut and split their stakes there would be no need of burning. Fencing and hauling is more expeditiously done when the rails are seasoned. I consider one of the greatest secrets in farming is a judicious saving and application of labor in the various operations of the farm. For labor saved is money made. I have spent some $50 in the last twelve months (as hard as the times are) in labor-saving machines, and consider the money not badly spent. In the first place, it occurred to me that a great saving of time and labor might be made in the tedious process of shelling corn by hand. I therefore had a machine made with no extra work but a whirl for the machine band to run on, cost, $12 50. I can in ten minutes detach my machine (threshing box) and attach my corn sheller, and in a day, I can shell corn sufficient to last man and beast for a month or more, with but two horses and two men and a boy to drive. I also had a straw cutter made with the same extra work, a whirl, cost $25, which I can attach to the same machine in five minutes, and cut straw enough in one rainy day to last several weeks for some twelve head of horses and as many cattle. So you see it is not only a saving of labor but you do it all in bad weather with but few hands.—And then when the weather is fair, I have no hindrance of this kind to delay my work, but go right ahead, from morning until night, and no stopping to shell corn and cut feed. I cut up every thing for my horses (or rather I make them do it,) and I never allow an ear of corn to go in their troughs until it is ground and mixed with some kind of cut straw or chaff. In the winter months, I have my servants' breakfast prepared for them while they are feeding, so that they do not go to work before sun-up in cold weather, which I consider a saving of time, for they cannot do much in cold weather before breakfast."

AGRICULTURE is the most ancient, the most honorable, and the most useful of arts.

WEDNESDAY, APRIL 12, 1843.

BACK NUMBERS.—All new subscribers to the "Southern Cultivator" can be supplied with the back numbers.

FARMERS' ENCYCLOPEDIA AND DICTIONARY OF RURAL AFFAIRS.

We have received the three first numbers of this truly valuable publication, and respectfully recommend it to the planting community. It is an English publication, revised and adapted to American agriculture. The numbers before us are better arranged than any work we have seen, by which reference can be had to any subject with the same facility that a word may be found in a common dictionary. It is published semi-monthly, by Messrs. Carey & Hart, Philadelphia, and will be completed in sixteen numbers, at 25 cents a number. The work is got up in a very neat style, in book form, and when completed, will be very valuable as a work of reference on all subjects of which it treats.

HORIZONTAL PLOWING.

We have to thank our friend HUNT, for his communication on the subject of horizontal plowing, and hope he will continue to forward such facts as he may deem of value to his agricultural brethren. We have endeavored to make a cut of his level, which we hope will be comprehended by our readers, for, in the absence of any engraver, our only reliance has been upon ourself. This is one of the difficulties under which we labor; for we shall be compelled to send abroad, perhaps to the north, for all our cuts. Though if the planters will sustain us with a liberal patronage, no expense shall be spared to afford every necessary embellishment to render the Cultivator equal, in this regard, to any Agricultural paper in the Union. We shall, therefore, in due time, if our subscription list will justify the expenditure, make such arrangements as will enable us to present proper cuts of all the most approved agricultural implements now in use, together with such improvements and new ones as may from time to time be introduced. We sincerely hope we are not too sangine, when we indulge the confident hope that Southern planters will sustain our enterprise most liberally, and enable us to build up a work, of which the South may justly feel proud.

We encounter the same difficulty in complying with the request of our correspondent, to "give some idea of a Cultivator," for the want of a proper cut, and are, therefore, compelled to rely upon the following description of that valuable plow, which we find in the Albany Cultivator.

CULTIVATOR.—This is an implement of agriculture, the use of which is to loosen the earth between rows of plants, so as to destroy weeds, and give the earth and plants the benefit of atmospheric influence. It is formed of a central piece of timber with diverging moveable side pieces, into which shares or points of iron are fixed, and the whole, drawn by a horse, pulverizes and stirs the earth, without penetrating so deeply as to injure the roots of the plants under cultivation, as is sometimes done by the common plow, particularly in crops of corn and potatoes. In preparing these plants for hoeing, the cultivator is now generally used in preference to the plow, as possessing all the advantages of that implement, with none of its disadvantages. As with the plow, so with the cultivator; a great variety of these implements have been placed before the public, the general principle in all the same, and differing only in the details and construction.

For the Southern Cultivator.

COLUMBIA COUNTY, April 10.

Messrs. EDITORS—The following is a preventive to the destruction of cabbage plants by the cut worm:

Take of China berries, boil them until a strong decoction is made; pour one gill at the root of each plant, and the worm will leave immediately. I have tried the remedy for many years. It has never failed. If the above recipe be worth publishing, you can do so under the initials. J. C.

For the Southern Cultivator.

TRAQUILLA, JONES COUNTY, April 3d.

Messrs. EDITORS—Noticing in the third number of the Southern Cultivator, under the head of "Agricultural facts," a request that every farmer and gardener, whose eye met the heading of that article, would send you such facts as he may be in possession of, relating to agriculture, I have thought proper to send you an experiment of mine in "*horizontal plowing*," which I have not seen noticed by any other in your paper, and which I am fully persuaded must be adopted by our planters, if a better plan cannot be suggested, to secure our lands from washing.—My own experience in this mode of plowing has satisfied me that it is much better than the system, so generally in use, of up-hill and down-hill plowing and planting, and if carried fully into effect, our hilly lands may be saved from washing almost as well as the level. I will now give you my plan as well as I can describe it, and depend upon you to correct bad spelling and grammar, as I am no grammarian.

FIRST—I make a level (the form given below) 15 feet at the base from foot to foot, braced across about 12 or 18 inches above the base; and after placing it on a level foundation to ascertain the center of the brace, by the aid of a plumb attached to the point, I then place a 3 inch block under one end of the level, so as to get the guage, indicated by the line of the plumb, on the brace or cross piece, to give a fall of one inch for every five feet. This done, I am ready for laying off my land.

In laying off, my plan is to commence on the point of a hill, so as to drain the water each way. Care should be taken, that the water be not carried too far before it is let off in ditches or outside of the field, to prevent the collecting of the water in so great a body as to wash the rows,—all of which, should have precisely the same fall as the water-furrow, (I call every row a water-furrow,) a result easily attained by the careful and frequent application of the level.—Should there be small sinks or gullies, they should be filled, to admit the water to pass over them—otherwise, it will collect in a body and break across, forming a wash carrying off the soil and growing crop. Should the hill-sides be abrupt, ditches should be cut at such distances apart, with sufficient fall, to take off the water gradually,—the direction of which, will be readily indicated by the use of the level, which enables you to give the ditch its proper direction without difficulty. In laying off the rows between the ditches, my plan is to commence on one side, and lay off half way, then commence on the other side, by which the short rows, if any, will be left in the middle,—which is very desirable, as it prevents the destruction of the margin of the ditch in cultivation. Sometimes, however, it is best to make the short rows nearer one side than the other, owing to the situation of the land,—a fact which the practised eye of an experienced farmer will readily perceive.

In the construction of your level, care must be taken to make it light—a small boy, with a hoe, will answer to mark every place where the level stands; and, after running the row, these marks or chops should be followed back, as it is impossible, on bumpy land, to run the rows correctly, if there is very material variation—although a slight variation, occasionally, is allowable to give the rows a better shape or curvature.

I have thus, as briefly as I can, given you my plan for preventing the washing away of rolling lands,—which, if adopted generally by the planters in Georgia twenty years ago, I have no doubt the lands would be worth one hundred per cent more than they will now command. If you deem it of any value, it is at your service—and any other facts I may deem worth publishing, you shall have.

Yours, respectfully,

THOMAS HUNT.

P. S.—Be so good as to give an idea of the plow called the cultivator.

"DIG ABOUT AND DUNG IT."—This direction was given many centuries ago, and has often been repeated, and perhaps I may say, as often forgotten or neglected. Last summer I took particular care to apply the above to some young pear trees. One was a graft of a year's growth, on a stock of several years' standing. The ground was loosened for some distance about the tree, perhaps a dozen times during the season. From a single stem of three feet, the new growth measured 30 feet! The effect on all was very obvious.—*Albany Cultivator.*

MAXIM OF HEALTH.—Sir William Temple says:—"The only way for a rich man to be healthy is to live as if he was poor, using exercise and observing abstinence."

A GOOD COW.

The following song, descriptive of the points of a celebrated Durham cow, was chaunted amidst great applause at the Darlington Agricultural Society's meeting.—*Gateshead's Obs.*

She's long in her face, she's fine in her horn,
She'll quickly get fat without oil-cake or corn.
Hurrah! hurr. h for this beautiful cow!

She's clear in her jaws and full in her chine,
She's heavy in flank, and wide in her loin,
She's broad in her ribs and long in her rump,
Has a straight and flat back with never a hump
Hurrah! hurrah for this beautiful cow!

She's wide in her hips and calm in her eyes,
She's fine in her shoulders and thin in her thighs,
Hurrah! hurrah for this beautiful cow!

She's light in her neck and small in her tail,
She's wide in her breast and good at her pail,
She's fine in her bone and silky of skin,
She's a grazier's without and a butcher's within,
Hurrah! hurrah for the beautiful cow!

SALTPETRE IN MEAT.

In the 12th number of the last volume of the Cultivator, there appeared a communication on the use of saltpetre in curing meat, and the following reason was assigned for abandoning its use, viz:—"It ought to be known, that saltpetre absorbed by the meat, is *nitric acid*, or *aqua fortis—a deadly poison*, whereby our salt meat becomes unpalatable and pernicious, a sufficient answer to which is found in the fact—that one of the constituents of common salt, is muriatic acid, as deadly a poison as the nitric acid of the saltpetre, and we might with as much propriety say, that the salt absorbed by the meat is muriatic acid, as to say that the saltpetre is nitric acid or aqua fortis. Therefore, the objection applies with as much force and truth to the use of the one as the other.

Saltpetre is the production of a chemical union between nitric acid and potassa, (potash,) and salt, of a like union between muriatic acid and soda—and in these, as in all other cases of chemical combination, the substances combining not only lose their properties, but the substances produced generally possess properties entirely different—frequently the very opposite of those of either of their constituents. From which it follows, that a perfectly innocent compound may be produced by the combination of two noxious substances—or a noxious compound by the combination of two innocent substances; and it is very improper, and well calculated to mislead, to designate a compound substance by the name of either of its constituents, as in the communication referred to, in which nitric acid and saltpetre are several times used as if they were but different names for the same thing.

Some persons think a small quantity of saltpetre very beneficial to their meat—others think it useless—the former need not be frightened from its use by the fear of being poisoned with aqua fortis—nor the latter deterred from trying it.—*Albany Cultivator.*

CURE FOR FOOT ROT IN SHEEP.—I take the liberty of sending you the following very simple remedy for foot rot in sheep.

I had occasion to procure a Spanish Merino Buck, a few months ago, from a distant part of the country, and on going into my sheep yard soon afterwards, I found him very lame in two of his feet, so much so as scarcely to be able to walk. I immediately removed him to the barn floor, and on examination found that his lameness was occasioned by that scourge of the Ovine race—the foot rot. I cleansed the hoofs thoroughly with warm soap suds, and fled to my books for a remedy. I soon found in the "Complete Grazier," p. 165, several remedies for this disease, but as I had not at hand the ingredients of which they were composed, I laid aside my books, and took down that "cure all," among farmers, my bottle of spirits of turpentine, and with a feather applied it to the parts affected, quite plentifully, twice or three times, in the space of three days, (keeping him upon the dry floor,) when I found that a perfect cure had been effected, and put him with the flock again, and have seen nothing of the lameness since.

Now, Messrs. Editors, this is a simple remedy, and found in every farmer's medicine chest, and I can safely vouch for its efficacy.

J. R. SPEED.
Albany Cultivator.

FATTING SWINE.—The food of swine is as much better for being cooked as the food of man. It is more palatable, more healthy, and much more nutritive. The digestive powers of swine are not as easily deranged as those of man, and the former can digest food which the latter cannot. Yet there is great economy in fatting swine on cooked food. Like man, they require a change of diet for health and thrift.—From our own experience we have come to the conclusion, that there is a saving of one quarter of the food—more particularly in the article of corn. Some farmers have said that there is a saving of one-third in soaking it for horses. But instead of grinding, scald your corn until it becomes soft, and salt it to your own taste. If your hogs lose their appetite, as they frequently do, by feeding steadily on one sort of food, give them a change for a few times, and they will eat greedily of the old dish again. Let their trough and feed be kept clean, and their lodging dry and warm, so that, as Cobbett says, you would be willing on a pinch of a stormy night, to turn into it yourself, if you could not find a better place. This mode of fatting is very agreeable to the swine, and economical for the feeder. If every farmer in our country will adopt our directions, what an immense annual saving would it be to the nation.—*Exchange Paper.*

TRUE FEMALE NOBILITY.—The woman, poor and ill clad as she may be, who balances her income and expenditure—who toils and sweats in unrepining mood among her well-trained children, and presents, them morning and evening, as offerings of love to her husband, in rosy health and cheerful cleanliness, is the most exalted of her sex. Before her shall the proudest dame bow her jewelled head, and the bliss of a happy heart dwell with her for ever. If there is one prospect dearer than another to the soul of man—if there is one act more likely to bend the proud and inspire the broken-hearted—it is for a smiling wife to meet her husband at the door with his host of happy children. How it stirs up the tired blood of an exhausted man, when he hears a rush of many feet upon the staircase—when the crow and carrol of their young voices mix in glad confusion—and the smallest mounts or sinks into his arms amidst a mirthful shout. God! it was a hallow from every countenance that beamed around the group! There was joy and a blessing there.—*London Journal.*

IMPORTANT TO FARMERS.—Hart Massey, Esq., of this village, took a small portion of the seed corn with which he planted a field, and soaked it in a solution of salt nitre, commonly called saltpetre, and planted five rows with the seed thus prepared. Now for the result; the five rows planted with corn prepared with saltpetre yielded more than twenty-five rows planted without any preparation; the five rows were untouched by the worm, while the remainder of the field suffered severely from their depredations.

We should judge that not one kernel saturated with saltpetre was touched by the worm, while almost every hill in the adjoining field suffered severely. No one who will examine the field can doubt the efficacy of the preparation. He will be astonished at the striking difference between the five rows and the remainder of the field.

Here is a simple fact which, if seasonably known, would have saved thousands of dollars to the farmers of this country alone in the article of corn. At all events, the experiment should be extensively tested as the results are deemed certain, while the expense is comparatively nothing.—*Washington Standard.*

FOR CORN—A RECIPE.—Mix plaster, unleached ashes, and quick fine lime together, in the following proportions:—two parts plaster, two parts ashes, and one part lime, and apply a small quantity of the mixture to each hill of corn immediately after the first hoeing, and see if it don't go a "leetle" ahead of any thing you ever tried to make corn grow. Be sure to leave one row without the application, "jest" to see the difference.—*Con. Farm. Gazette.*

AUGUSTA MARKET.

TUESDAY P. M., April 11.

Cotton.—The market during the latter part of last week was quite animated, and prices rallied till an advance of ¼ to ⅜ cent was obtained for all descriptions, upon the prices which ruled during the two first days of the week. Yesterday and to-day, however, the feeling has been rather easier, and the tendency is rather downward, yet we quote at the advance rate of the latter part of the week, 4 to 6¼ cents, extremes—principal sales 4¼ @ 5¼ cents; remarking, however, that these rates were not so readily obtained yesterday and to-day as a few days previous.

Trade and Business.—Since our last, spring has opened upon us, and the business parts of the city begin to assume that quiet appearance which denote the presence of the planters among their fields, preparing for the new crop. There have, therefore, been few arrivals of planters during the past week, and consequently a limited trade has engaged dealers.

Exchange.—The market is abundantly supplied with exchange, which continues at par on all points north and east of us. The amount of Central Bank money offering is not very large, and the sales range from 27½ to 30 ℔ cent discount—we hear of no sale below our lowest figures. State 6 ℔ cent Bonds are in demand, and command 50 cents in the dollar very readily. Alabama notes are from 20 to 25 ℔ cent discount.

CONTENTS OF THIS NUMBER.

	PAGE.
Sugar from Corn	41
Soaking Corn for Horses; Keene's Marble Cement; the Orchard; Pruning Fruit Trees	42
To protect Fruit from late Frosts; Extract from H. Colman's Address; Agricultural Schools	43
Industry; Cure for Scours in Cattle; Duties of Farmers; to destroy Lice on Fowls	44
Farming without Rum; Cultivation of Corn; Making Manure; Milking Cows; Preservation of Health	45
Prognostics of the Weather; the Roller; to cause Cabbage to Head in Winter; Culture of the Strawberry; value of Seasoning Fire Wood	46
Editorials; Description of Cultivator; to destroy the Cut Worm; Horizontal Plowing; Dig about and Dung it; Maxim of Health	47
A good Cow; Saltpetre in Meat; Cure for Foot Rot; to fatten Hogs; True Female Nobility; Important to Farmers; for Corn; Augusta Market	48

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SOUTHERN CULTIVATOR.

VOL. I. AUGUSTA, GA., APRIL 19, 1843. No. 7.

PROGRESS OF IMPROVEMENT.

The *progress of improvement* in agriculture, though gradual, is yet steady. The importance of this branch of industry is beginning to be more and more appreciated. The whole country is more or less interested in it, as it furnishes, besides what is consumed at home, at least three fourths of all the exports of the United States. The vast public domain of unsold lands, too will be affected by this progress, and its value proportionably advanced. It may be well here to mention some of the principal sources of this improvement.

CAUSES OF IMPROVEMENT.

The *geological surveys* ordered and in progress, or recently completed, in many of the States, besides the other important benefits thereby conferred on those States, have contributed much to advance the science of husbandry.

These, in connexion with the experiments of agricultural chemistry, by thus directing the attention to their analysis, are developing the nature of the soils and their adaptation and means of increased production, by different seeds, products and methods of cultivation and manures, and so enable the farmer or planter to use the varieties of his land to the best advantage.

The increasing number of *agricultural periodicals* and treatises, and their cheap and more extensive circulation throughout the land, are also producing a happy effect. The farmers and planters in the various sections of our country are thus brought acquainted with each other's operations and success, and also with the methods of cultivation and rearing of stock, &c., common in England and on the continent, new products and the result of their trial are noticed, and the knowledge of many useful discoveries thus extended. The prejudice against "book farming," as it has been termed, which has so long proved a barrier to the adoption of valuable improvements thus suggested, is gradually wearing away; and a happy combination of science and practical skill is thus secured, the results of which are every year becoming more and more apparent.

Agricultural societies also exercise great influence in furthering the progress of agricultural industry. These are of but comparatively recent date, and their institution and increase in number and prosperity serve to mark the progress of improvement in agriculture; and if still further aided by an efficient board of agriculture, like what exists in Great Britain, they would no doubt be yet more successful. It is only about fifty years since that board was there established, and it has proved of extensive benefit to that active empire. By means of these societies, great numbers of the agriculturists of our country are brought together, to compare notes, as it were, to observe each other's success, and to converse on the topics connected with this branch of industry. They examine the machines, implements, animals and products offered for exhibition, and are induced to bestow more care and labor in the selection of their seeds and stock, in the preparation of the soil, and in their tillage and harvesting. Every year new and valuable improvements are thus made known and introduced, by which many are essentially benefited. Premiums also encourage to effort, and a highly salutary incentive is furnished, in the honor to be acquired of successful and approved farming. A similar effect, too, results from the bounties given by the different States to encourage the culture of some particular product. These have never been offered without a new impulse being stirred, and leading to increased attention to the pursuit.—Some of the States in these respects are far in advance of others, but almost all are beginning more to appreciate their true interest, and seeking to extend their true prosperity.

While adverting to the causes of general improvement in the agriculture of our country, it may not also be improper to allude to the increased habits of *temperance and sobriety* of the laborer, by which the condition of the farm-house and farm is so essentially benefitted, and domestic happiness and effective strength promoted. A clear head and a vigorous frame, in combination, will ever be most successful in tillage, as in every branch of industry. The lengthening of life and the repair of health, thus secured, render many who have been but drones and mere consumers, also active and efficient producers, as well as healthful consumers. The amount added, too, in the increased skill, as well as the saving from less breakage of tools and machinery of labor, and the actual effectiveness of such laborers as have heretofore been drawn from the intemperate class, now reformed, constitute no small item of gain in this view of the subject. No little damage has been thus sustained in the "inebriate" management and cultivation of the land, which is now avoided. Were this the proper place, some most interesting deductions might be made as to the physical force and efficiency thus added to the various branches of industry, and the bearing of the whole on agriculture, as a source of our national wealth.—*From Mr. Ellsworth's Report.*

IMPROVEMENT OF FARMS.

Plants as well as animals require food, which they obtain from the atmosphere and the soil.—When land is naturally barren, or is impoverished by severe cropping, it can only be improved by good tilling and manure. In looking over our farming districts, we find as a general rule, that farmers do not appreciate the value of manure; but few take the trouble of informing themselves of its true nature, and upon what its peculiar effects upon the growth of plants depend.

Manure is made up of certain gases, a few chemical salts, and some other less important substances, which, when placed under favorable circumstances undergo certain changes, which fit them to afford what is requisite for the perfection of plants. When the chemical changes in decomposing substances are taking place, gases are formed which are sensible to the smell; upon these the most valuable quality of manure depends; we consequently see the importance of putting manure in a situation where the gases may not be lost, either in a compost heap well covered with substances which have an absorbing power, such as charcoal, common earth, &c., or with something that will by a chemical change give off what would be useless or hurtful to plants, and take up what is beneficial in its place. Plaster of Paris, potash, soda, common salt, &c., act in this way. Sometimes there is contained in the soil in a latent state, as much nourishment as would supply all the plants that could be raised on it for a long time, providing there was employed some chemical agent to liberate it. This accounts for the wonderful effects of lime in some cases.

All animal and vegetable substances contain the elements of plants; nothing therefore on a farm should be lost. If a farmer wishes to add speedily to his productions, he must convert every refuse substance into manure. The mere manure he has, the greater will be his crops, and after a farm is once in good order, it is very easy to keep it so. Hundreds of substances are thrown aside and wasted, which would add to the quantity and improve the quality of the manure heap.

Manure is the laborer's friend; it makes the ground more easily tilled, and pays invariably for itself. In other countries they use much manure, for it is the only way they can produce the abundant crops that reward them for their labor. Every farmer should have a compost heap, into which he could put all his manure from his stables, and also deposite all his weeds, ashes, house slops, dead animals, feathers, rags, mortar, shavings, leaves of trees, &c.; and this should be constructed on a side hill if possible, that everything could be thrown in easily from above, and an opening left from top to the bottom on the lower side, so that it could be closed with boards shoved in proper grooves, which could be taken out separately, to facilitate the removal of the compost. Land is always best when it contains a proper proportion of clay, lime and sand, with a suitable quantity of animal and vegetable manure. When either of these is wanting, it should be added, for it has been found that such additions have produced the most beneficial effects.

Our undivided attention should be paid to the improvement of the land we have under our care. If we employed more thought and reflection in our farming operations, and used the means in our power with more sound judgment, then could we expect to see the best results following our exertions. If farmers would commence a series of experiments on a small scale at first, and when they ascertained what would best answer their purpose, then pursue it, they would soon find how much more valuable and productive they would make their farms. There is no question but that one of our greatest misfortunes is, that we have too much land; we do not value it sufficiently; we do not properly attend to it. There are but very few who have ever put their lands to the test, to show what their powers are. A system of robbery exists over the fairest and most eligible land in our country; and when the land becomes partially exhausted, the husbandman, instead of improving his farm by good cultivation, and the application of a proper kind of manure, concludes to sell out and purchase another farm where land is less expensive and more productive—a very bad practice, frequently bringing sorrowful disappointment from the severing of family ties and old associations, and also from blasted pecuniary expectations.

Such a spirit is manifested in every part of our country; even in Dutchess, one of the most productive counties in this State, we find that many farmers are becoming dissatisfied with their healthy and favorably situated farms, and are emigrating to other States, where much uncertainty exists whether the climate will agree with them, or if they will ever receive sufficient

returns to satisfy them for the sacrifices they must make. If such farmers would commence improving their lands, beginning on a small scale, they would soon find, that owing to the greater prices obtained for their produce in this market, they could compete with the farmers of any State of the Union, and would remain eligibly situated in a healthy country, having all the benefits of a long established society of well-bred and intelligent people.

HENRY A. FIELD, M. D.

New York, March, 1843.

American Agriculturist.

SALT AS A MANURE.

The testimonies in favor of salt as a destructive to noxious insects and favorable to vegetation, multiply upon us. The great desideratum in regard to the application of salt, is to ascertain in what quantity it should be applied; for while a certain amount is of universally acknowledged utility, an increased quantity is pernicious. Repeated experiments only can determine this. These are in progress both here and abroad. These analysis may be found, some of them in Turner's Chemistry; others, and very much at large, in Johnson on Fertilizers; and the whole subject is fully and admirably treated in Dana's Muck Manual for Farmer's, a book which we beg leave to recommend strongly to our inquiring correspondent, E. V. W. D.—*New Genesee Farmer.*

LAFAYETTE, Onandaga Co., N. Y., February 23, 1843.

DEAR SIR—Having, during the past summer, heard numerous complaints about corn-fields being devastated by the grub-worm, I will describe to you the precautionary means that I make use of for the extermination, not only of them, but of every worm that infests our fields, and at times make such great havoc with our crops.

Having frequently been under the necessity of replanting corn, and as often been troubled with unmarketable potatoes, from the ravages of the angle-worm, I was induced to try what effect salt would have on them. Before its trial, I had no doubt that a sufficient quantity would destroy all insects; but I was fearful that, at the same time, it would destroy vegetation too. Yet I was determined to hazard the experiment.—Accordingly, last spring, about twelve days previous to planting, I sowed five barrels of salt, broad cast, on five acres of ground; and planted the field, three acres with potatoes and two with corn. Among the corn I discovered only one stem at all injured by the worm. The corn, however, did not produce more than an average crop. The potatoes, however, did much better. From the three acres I obtained 1260 bushels of fair, good sized, smooth, marketable potatoes. The ground was in good order, and planted to potatoes the year previous. The result I attribute mainly to the use of salt.

That salt will destroy vegetation, I now have reason to doubt, (unless applied extravagantly,) by experiments that I made last summer. In a portion of the wheat-field where I had sowed nine varieties of wheat, I applied, at the time the stems were five or six inches high, salt, at the rate, I should think, of two barrels to the acre. None of the grain was destroyed; and yet I saw no benefit from the application. The whole field was badly shrunk, that portion as well as the rest. The other trial was upon some Canada thistles. To each of several stems I applied a handful of salt; and the only effect that I could perceive, was that it made them grow more vigorously. I applied it frequently and in large quantities to a patch of chick-weed growing in the garden; and was equally unsuccessful. The bed would wither down for a few days, and then rise up as vigorous as ever. The effect of brine, however, is different from that of salt. Wherever I have applied that, it has immediately destroyed all vegetation within its reach.

I am, myself, so well satisfied with the beneficial effects of salt in destroying insects, that I intend to sow it upon all of my meadow land this spring, at the rate of one barrel to the acre. Upon one-half of my wheat field, I sowed salt at the above rate, last fall, a short time previous to sowing the wheat. It looked well during the late thaw; but its effects, whether favorable or unfavorable, are yet to be seen. I use salt pretty much as people use Brandreth's pills—as a sovereign and infallible remedy for every ill the earth, as well as flesh, is heir to.

It gives a healthful appearance to peach trees—it invigorates asparagus beds, and it is almost incredible what quantity can with perfect safety be applied to their roots—when thrown into the heads of cabbages, it promotes their growth, and effectually destroys those ill-shaped, green insects that so often destroy them. Horses, cattle and sheep apparently know its beneficial qualities upon themselves; while hogs, with a little patience and perseverance, can be made exceedingly fond of it. At the present price of salt, it is within the power of every one to try at least one experiment with it. How many will do so the ensuing spring, and report success to head-quarters? E. V. W. DOX.

P. S. By giving us an analysis of the following articles, you will I presume confer a special benefit upon every reader of your valuable journal. The object of the analysis will be, to enable us to make more judicious applications of manures, both as to quality and quantity, than we are generally in the habit of doing.—Every farmer knows that manures operate very differently; yet our experience has not extended much beyond the use of gypsum, lime, and the manure of horses, cattle and hogs. I have often heard it said that, in order to raise red peppers, the product of the hen coop must be used. That it is effectual, there remains no doubt; but why it is so, I have never yet been able to explain. Or why is it that gypsum has so much effect upon clover? Why does unleached ashes benefit timothy, more than leached ashes? In fine, why does it benefit it at all? A table of the analysis of the various manures, together with that of the different varieties of grain, ought to be constantly before every farmer. He will then be able to decide at once, from a knowledge of his means, what kind of grain to sow.

The articles contained in the following list can be easily obtained at almost any place, provided they should be found serviceable;

Salt	Swamp Muck,
Gypsum,	Lime,
Wheat Bran,	Hen Dung,
Leached Ashes,	Horse "
Unleached Ashes,	Hog "
Rotten Wood,	Cattle "
Sheep Dung.	

E. V. W. D.

We have been kindly favored by Dr. Penney, editor of the Evening Post and the Western New Yorker, with the following communication, containing most if not all of the information sought for by the above correspondent:

ANSWER TO AGRICULTURAL QUERIES.

SALT—is in chemical language, Chloride of Sodium—that is, a combination of the gaseous substance chlorine, with the metal (or rather metaloid) sodium, in the proportion of 60 per cent of chlorine.

Sodium united to oxygen forms caustic soda.

" " to carbonic acid, carbonate and bicarbonate of sodo.

" " to sulphuric acid, sulphate of soda, an excellent article for clover and the pea kinds; costs in England 10s. per cwt.—is made from common salt, by adding sulphuric acid.

" " to sulphur, sulphate of sodium.

" " to phosphoric acid, phosphate of soda.

The component parts of salt are found in most plants, and therefore must be in the soil that bears them. If 25 tons of turnips be taken from an acre, there are removed from the soil 64 lbs. of soda and 14 lbs. of chlorine. If red clover, 12 lbs. per ton of soda. If 25 bushels of wheat, 3½ lbs. in the grain and about 1 lb. in the straw.

Salt sifted into your manure heap in layers, combines with the ammonia, one of the most fertilizing substances of the farm yard which is ever escaping, making muriate of ammonia and carbonate of soda, both valuable articles: the first affords food to the most valuable plants, the second is a most powerful solvent of vegetable fibre, and consequently a most valuable agent in preparing the manure for the nourishment of crops. As to quantity, say a peck once a week on the farm yard manure of a farm of 150 acres.

The other combinations are sulphate of sodium, carbonate of soda, (soda of the shops,) the sesqui-carbonate, and bi-carbonate, the caustic soda, (produced when common salt and lime are mixed in compost) and different phosphates of soda, which are found in the ashes of nearly all plants.

Experiments are reported by Johnson, made at Eske Hale, (Eng.) by a Mr. Fleming, in 1841, whereby it appears that the application of six bushels per acre of salt to grass land, on a high, bleak, thin, and light soil, increased the produce from two tons 12 cwt. to three tons 12 cwt. per acre.

GYPSUM—is in chemical language, the Sulphate of Lime, or a combination of sulphuric acid and lime.

Common Limestone, Chalk and Marble, and carbonates of lime. Quick lime is the combination of the base of lime—calcium, with oxygen. Slacked lime is called the hydrate of lime, being a combination with water. There are also the sulphuret of calcium, and the nitrate and the phosphate of lime. This last is a principal ingredient in the bone dust manure.

The elements of Gypsum are found in the the ashes of most vegetables, and are therefore necessary in the soil; for example, the crop of turnips mentioned above, removes from the soil 45 lbs. of lime from the acre, and 49 lbs. of sulphuric acid. The red clover 63 lbs. of lime and 10 lbs. of sulphuric acid. The wheat—grain 1½ lbs. of lime and 8-10 of a lb. of sulphuric acid, and the straw 7½ lbs. of lime and 1 lb. of sulphuric acid.

Liebig recommends gypsum to be employed for fixing the volatile ammonia of the manure yard, which produces a sulphate of ammonia and carbonate of lime. The use of salt, as already mentioned, seems preferable.

WHEAT BRAN.—We have not at hand an exact analysis of this substance—but from the analogy of other vegetable manures in a dry state, we should say its value would be greatly enhanced, by promoting its fermentation, by mixing it with the liquid manure of the farm yard. In this case it could not fail to afford a valuable addition to fertilizing matter.

WOOD ASHES are different according to the kinds of wood from which they are derived.—The hard woods generally afford carbonate of potash and silicate of potash, both valuable either in feeding plants directly or in reducing other matters into a form fit for food to plants.

In the crops already referred to, the turnips carry off from the soil 145 lbs. of potash, red clover 45 lbs., wheat grain 3½ lbs., straw ½ lb. per acre.

LEACHED ASHES differ from the above, merely by the removal of the greater part of the potash.

ROTTEN WOOD contains the same elements as the tree from which it is derived, except that a portion of its carbon has combined with the oxygen of the atmosphere and passed off as carbonic acid gas. The elements of potash, &c., are in a condition to be more immediately available for nourishment than in saw dust.

SWAMP MUCK.—This substance consists of different materials in different cases—but generally, it consists of vegetable matter in a very inert state. On burning, it will be found to give off organic elements similar to living vegetables, and the ashes will show similar saline and earthy materials. Lord Meadowbank, as re-

ported by James F. W. Johnson, made many important experiments on this substance, especially when it takes the form of peat, the result of which is, that it may be rendered active, by being partially dried in the air and mixed in a compost heap with about half its weight of hot fermenting animal manure, or even by exposing it to the vapors which rise from the naturally fermenting farm-yard manure. If it can be made to ferment in any way, it is thereby converted into a rich fertilizing substance. Johnson is of opinion that the dried and pulverized peat, with a small mixture of animal matter frequently wetted by pumping over it, from a proper cistern, the liquid manure, would soon undergo this needful change.

Lime.—The analysis of this substance has been given already. Its value in agriculture has been long known. It pulverizes stiff clays; it hastens the decomposition of vegetable matter, either in the soil or in the compost heap. By this decomposition carbonic acid and other compound substances are produced, which serve for the food of plants. In the crop already referred to of 25 tons of turneps from an acre of land, there are removed from the soil 45 lbs. of lime; in a ton of red clover 63 lbs.; and in 25 bushels of wheat grain 1½, straw 7 lbs.

Hen Manure, (with that of pigeons and fowls generally,) contains a good proportion of nitrogen, an element always valuable as food for vegetation. In Flanders, the produce of 100 pigeons is worth 20s. sterling per annum, for agricultural purposes.

"The Guano, or Huano, has recently attracted great attention; no less than 40,000 tons having been shipped to England as a manure.—Much discussion has arisen as to its nature, but the received opinion at present is that it is bird's dung. It is found on the islands adjacent to the coast of Peru in such enormous quantities as to induce much skepticism as to its origin. In some places it lies from 80 to 100 feet in depth; feathers and egg shells are frequently found deeply buried in it; it was used as a manure by the Indians long before the conquest, and without it, the valleys of Peru would be almost desolate; it is pungent in the extreme, and, if used in large quantities, burns and destroys vegetation, while in smaller quantities it vivifies and gives extraordinary rapidity to growth."

The following is an analysis of two specimens of Guano, showing very different results:—

1. Water, salts of ammonia and organic matter expelled by a red heat	23.5 per cent.
Sulphate of soda	1.8
Common salt and a little phosphate of soda	30.3
Phosphate of lime, with a little phosphatcof magnesia and carbonate of lime	44.4
	100
2. Ammonia	7.0
Uric acid	0.8
Water, carbonic and oxalic acids	51.5
Common salt, with a little phosphate and sulphate of soda	11.5
Phosphate of lime	29.3
	100

We regret that we have not at hand an exact analysis of the other animal manures mentioned. In general, it may be stated, that their value is in proportion to the nitrogen they contain, and in this respect they stand in the following order:—64 lbs. of the mixed, solid and liquid excrements of the hog are equal to 36 ditto of the sheep, 54 of the horse and 98 of the cow—to the solid of the horse 73; do. of the cow 125—to the liquid of the horse 16; of the cow 91; to pigeon's manure 5; dry woolen rags 2½.

Ink.—You may restore ink that has been frozen, by dropping a small lump of gum arabic into the ink bottle, and when it dissolves, shake the ink well, and the gum will hold the coloring matter in solution.—*Alb. Cultivator.*

AGRICULTURAL EDUCATION.

The following extract, says the Farmers' Gazette, is from the address of the Hon. S. H. Huntington, delivered before the Hartford county Agricultural Society, at their last annual exhibition. Mr. Huntington is a practical farmer, and was last spring appointed Judge of the County Court, by the Legislature, and we find him an excellent judge as well as a good farmer. The counsel of such men are well worthy of attention.

"The farmer's standard of education is too low, but not especially so, in reference to his own occupation. He is a co-worker with Providence in the laboratory of nature; and yet how little does he really understand of the materials he operates upon; the nature of his various soils—the power and adaptation of his manures—the singularly curious combinations he forms, and of the beautiful and almost miraculous operation which he puts in motion, to produce the crowning fruits of his efforts. Not so with all other pursuits; the mechanic perfectly comprehends the principle upon which he combines. Science has arranged and reduced to system his art, and he is considered as but half accomplished in his trade, if he can boast of nothing beyond a skilful use of his tools. So with all other professions; knowledge is the most extensive and varied, where the science is of daily, nay, hourly application, in the construction and use of our numerous implements:—where animal and vegetable philosophy invite us to their investigation, as a matter of interest, as well as attract us by disclosing the beauties and wonders of creation—where chemistry is absolutely required to enlighten and guide us in the composition of the materials of fertility—and where geology should point out to us the origin, and explain the nature and adaptation of our soils, it is too generally considered that the very lowest grade of our common school education is most abundantly sufficient. How often do we see among the sons of farmers, one destined to a learned profession, and another, perhaps, to commercial life. The first is eventually found at some one of our colleges, and the other is, year after year, at the high school or academy; while to him who is destined to succeed his father on the farm, two or three winters at the district school, after he has entered his teens, is about all that can be afforded. Thus, while schools and colleges are established, patronised and endowed from taxes paid by the farmer, for the education of those employed in other pursuits of minor importance, agriculture has not, as yet, found the first professorship endowed for her advancement.

"The consequence of all this has been to degrade the position of the farmer; to render a pursuit, of all others the most interesting, and, in itself, the most attractive, repulsive to our young men of enterprise and intelligence, to lead them to look upon the labors of the husbandman with contempt, as though they were disgraceful.

"But the effect upon the farmer in reference to himself, personally, is still more lamentable: it too often and to effectually closes the avenues to the mind against all improvement. The rule of doing as their fathers did, is to be adhered to at all events, for it is honoring their memory. A labor-saving implement is rejected as an innovation, and to assail a system of cultivation which has received the sanction of half a century or more, notwithstanding the effect may have been to render the lands almost worthless, is presumption—absolute madness. All real improvement, therefore, connected with the cultivation of the soil, is received with far greater reluctance and extends with much less rapidity among the farmers than among any other classes of men. It is said that the late Mr. Coke, the most distinguished agriculturist of England, could trace the progress of his own improvements upon the adjoining lands of his neighbors, as distinctly as he could trace their boundaries; attempts at persuasion effected nothing, and while he exhibited an almost miraculous renovating of a comparatively barren soil, many years passed away without the extension of his improvements half as many miles. What, let me ask, is the remedy for this great evil?—and would that I had energy to send home the inquiry with resistless power, to every farmer of our land. It is education—intellectual improvement—the expansion of the mind.

"The culture of the mass of mind should be deeper and more thorough, and then it will act as one of the most sufficient means of a deep and thorough cultivation of the soil.

"Position, as a class, would thus be greatly elevated, for, happily as yet, in our country education, under all circumstances but those of abuse, commands deference. Physical labor would be rendered more respectable, and we should assume that relative position and influence to which our numbers so justly entitle us. Then, our young men, as they seek to rise in life, would not consider it as a matter of course, that they must escape from the farm—but would be induced to pursue agriculture, not only as a source of a reasonable competence, but as the path to influence and distinction. Society would become generally refined, and that great evil, (fondness for the tainted atmosphere of a large town,) would give place to a pure and primitive love of rural life."

MANURES.

It becomes us in this enlightened age to look to our ways, and if there is any method which tends to improve or augment the productions of any branch of industry, most surely should it be received and practiced. It has been, and still is, a matter of regret that the farmer should be so backward to receive the truths which science and close observance have brought to light; but if appearances are not deceitful, that backwardness is slowly being removed. Well has it been said, that "manures are the farmer's riches."—But how little pains are taken to husband those riches; no one can reasonably expect a succession of good crops without them.

If manures are so necessary for good husbandry, why is it that they are so much neglected and allowed to waste? It may be considered a broad assertion, but it is none the less true, that not one in a thousand in the State of New York, properly saves those manures in common use, namely, the solid excrements of animals.

But it has been shown by experiment that liquid manures, which are every where allowed to waste, are equally beneficial when applied to plants. The Chinese apply liquid manures almost entirely to vegetation, and in no country has agriculture reached that degree of perfection as there; scarce a weed is to be found on the land, and in their fields of grain, naught but grain is seen; which is, in a great measure, owing to the fact that they do not carry on to the land, in long or barn yard manure, an immense reservoir of the seeds of grain, noxious plants, &c. Liquid manures, it has been proved by direct analysis, to contain in large quantities, those ingredients which are not only highly nutritious and stimulant, but in the state to be most easily absorbed by plants.

It would be but little expense for the farmer to prepare his stables so as to collect this kind of manure, and convey it to a large reservoir, so covered as to prevent evaporation, and there saturate it with earth, or apply it to vegetables in the liquid state. It is considered best for grass lands, and to such it may be applied, if liquid, by placing a large hogshead or some other vessel, on a cart, fill it by means of a pump, then cause it to flow into a box four or five feet in length, the bottom pierced with holes, then by drawing over the ground, it is distributed evenly and with little trouble. A cow, in five months, discharges urine sufficient as manure for half an acre, of the richest quality and of the most durable kind. The excrements of a healthy man, solid and liquid, are sufficient in one year to

nourish the most exhausting crop on one acre of ground, and yet neither of these manures are applied to the soil—save what little of the former may be absorbed by the litter of the barnyard. The most convenient method of securing the liquids of the barn yard, is by causing the yard to descend towards the centre, and absorb them with straw or other litter, a means of which most are acquainted. I would not neglect the solid manures, to preserve those that are liquid, but both can be saved and both should be. If all the manures which are in the power of every farmer, were properly husbanded and applied to the soil, one great step would be taken to advance the agricultural intе ests of this country—farmers would reap better crops, and that portion of our country which has been "worn out," might again be made to yield plentiful harvests.

The agricultural community, as a mass do not take sufficient interest in improving the mind, and as long as the most essential part is left uncultivated, the science of agriculture will not move on with rapid strides towards perfection; neither will they apply the principles which have been brought to scientific men, in such a manner as to be beneficial, though if rightly understood by men who had studied and seen the beauty of them, would greatly advance this valuable science. Every farmer can at least do this, take at least one paper devoted to his interests, and form a little library of agricultural books, to read at liesure hours; he can procure some choice volumes on this subject, and will therein find many valuable hints, doubly worth the price they cost.—*Central N. Y. Farmer.*

PREPARATION OF SEED WHEAT TO PREVENT SMUT.

As the season for the active operations of the farmer is now approaching, it is important that any hint that may be made serviceable in the production of our staple crops, should be placed before the community in time to be made use of, if it is worthy of imitation. For this reason I send you a note of my practice in preparing the seed of spring wheat, to prevent smut; I have not tested it on winter wheat, but I think it would be decidedly beneficial.

For the last five years, I have been in the habit of preparing my seed in the following manner: In the first place I make a brine of common salt, as strong as it can be made by beating and stiring, in this way it can be made so strong that it will raise all the oats and imperfect grain. When the wheat is made perfectly clean, and separated from the brine, I mix slacked lime as long as it will stick to the wheat, and sow it immediately, if I am ready, but I have let it stand twenty-four hours before sowing, without injury to the wheat; I should think it prudent however, to sow it, for a general rule, within twelve hours. Since I have been in the practice of treating seed in this manner, I have not been able, on any occasion, to detect a particle of smut in my wheat. When I consider, that in particular instances it has been detected in wheat, where the seed was not prepared with brine and lime, and also in the case of my neighbors who have neglected it, and have generally had more or less smut, I can feel no hesitation in stating my belief, that the treatment of the seed has been the cause of preventing smut. I am aware that we have multitudes of experiments, given by able and most excellent farmers, to test the cause and prevention of smut, and what is very strange, every writer seems to have found out a new cause and means of prevention.

I am very confident that many causes may produce smut, such as imperfect seed, and perhaps the effects of too wet or dry seasons, acting with reference to a peculiar condition of the soil, and all, I believe, agree that smut on the seed, has a strong tendency to produce smut again. I do not pretend to have made any new discovery, but I am certain that I have been benefited by it, and am anxious that others who perhaps have never had their attention called to the subject, may also test its value. Should this article meet the eye of any of our farming friends, who do not believe in "book farming," and who have "always known that," I would respectfully solicit, that they would let down their dignity and self-complacency a little, and for once try a book experiment, and see if they are not benefited, and if they are, will they not try a "book?"—*Central New York Farmer.*

Preparation of Seed Wheat.—By sifting wheat in seives that will retain the large seed only, a selection of the best grain will be made. Wash seed wheat thoroughly in water several times, and skim off all the light seeds, shriveled kernels, oats, &c., that swims on the surface. Then dissolve salt in water, as much salt as the water will take up, soak the grain in this brine. This will cause other berries to float, and some oats that may remain, which may be removed. Let the grain remain in the brine half a day, or a night, and longer if you please, if the water be fully saturated with salt, and the grain be kept in a cool place. Wheat has been kept in this manner, in good condition, two or three weeks, in cases of storm which prevented sowing it in season.

After soaking in brine, lime the train with fresh slaked lime, mixing and stirring the grain and lime well together, so that every berry may be watered with lime. Let it remain half a day or a day before sowing. This method has been well tried thousands of times, and almost invariably it has proved a preventive of smut. It is a very cheap preparation, and besides guarding against injury from smut, it will serve as a protection, in some measure, against insects, as they dislike lime and salt. These substances, as far as they are used, are useful as a manure.

Boston Cultivator.

Prevention of Smut.—Putche's (German) Encyclopedia of Agriculture gives the following as the celebrated recipe of Mons. Sckruitz, of Duerer, in the province of Juliers, (Prussia) for preparing seed wheat so as to prevent smut in the crop. So confident was Mr. S. in the efficacy of his method, that he offered a standing reward of a ducat for every head of smutted wheat found in his fields.

For every 500 lbs. seed wheat take one lb. of allum, one lb. copperas, ½ lb. saltpetre, ½ lb. verdigris. Pulverise these ingredients and dissolve them in a sufficient quantity of boiling water. When the solution has become cold add as much more water as will be required to moisten the whole thoroughly. The heap should then be turned several times within the ensuing twenty four hours, and well mixed; and it is ready for seeding.

Industry.—Demosthenes, when asked the first requisite to eloquence replied, "action"—when asked the second, he replied, "action"—and the third, he still replied, "action." Industry bears the same relation to agriculture, that action did to eloquence in the estimation of the Athenian orator. With industry the farmer may accomplish every thing, and without it he can do nothing. Let him then study the value of time.

Time is his great capital and should be well invested. The wealth of the world, its high civilization, and all its magnificent improvements, have been created and fashioned by the labor and industry of man. The poorest soil and most unfavorable climate are scarce impediments to an industrious and energetic people. Look at Holland, reclaimed from the ocean, fenced in by her embankments and mud walls, literally a smiling garden, where once there was nothing but bogs and ocean's wave. Look at Switzerland, where an industrious and hardy peasantry contending against the avalanches of snow and ice and emboulment of mountain masses of rock, falling and crushing for miles square every thing before them, have cut the hills and mountain in terraces and planted them with vines.—Lands which before were worse than nothing, by this improvement sell for ten thousand francs per acre.

CURE FOR INFLAMED EYES OF THE HORSE.

Notwithstanding my occupation requires my attention and exertions in attempting to cure or palliate the "ills that flesh is heir to" in the human species, my sympathies have been occasionally enlisted in behalf of that noble animal upon which we are so much dependant for many of our pleasures and comforts, and derive so much important service—the horse, in consequence of the empyric and barbarous treatment frequently practised upon him.

If the animal who claims for himself the image of his maker, is willing to indulge in Brandreth's Pills, Lobelia, Magnetic Ether, and Jew David's Plaster, and write for his epitaph, "I was well, took physic and died," let his curiosity be gratified; but while we assume to ourselves the guardianship of the fourfooted part of creation, let us discharge the duty in that manner that shall at least entitle us to the virtue of humanity.

Not unfrequently when I have been giving my horses high feed and severe service in hot weather, over hard and dusty roads, I have observed them frightened and shy from objects to which they usually paid little or no attention; and upon examination of the eyes, have discovered the external membrane (*tunica conjunctiva*) thickened so much as to impair or obstruct the vision, presenting a whitish appearance occasionally in spots, but frequently involving the entire membrane covering the organ. At this discovery many kind friends, actuated by the best of motives, would volunteer their aid and advice, for the purpose of removing the difficulty. Mr. A., exhibiting an air of great confidence in his skill in such matters, would say: "You must pound glass until it is very fine, and blow it into the eye through a quill, to *cut the scum.*" A remedy, or rather an intended remedy, that would most assuredly render him blind, even though the disease should fail to accomplish that result. Then comes Mr. B.: "Sir, you must blow burnt alum in that eye." Mr. C., quite as knowing as his neighbors in these affairs, makes the following prescription: "Blow powdered blue stone into it, and rub a little rabbit's grease above the eye, and my word for it, to-morrow morning it will be as bright as a diamond.

By just such treatment many a noble roadster has been prematurely consigned to the cart or tread-mill; whereas, had the matter been intrusted solely to the operations of Dame Nature, the result would have been widely different.

The course that I invariably pursue in such instances, is to keep the animal in a dark stable, to be fed upon hay, or if practicable, fresh cut grass and coarse bran—bleed freely from the mouth, and administer one and a half pounds of Glauber salts, two drams of nitre, and fifteen grains of tartarized antimony in a bucket of water, and repeat the same daily until free purgative operation is produced. The animal will be invariably found in a feverish condition, and if kept from water for a short time will drink the mixture freely. If these means do not soon produce a salutary impression, I bleed from the large vein immediately below the eye. By placing the thumb of the left hand firmly upon the part, the vessel soon becomes distended, and the operation may be most conveniently performed with a common spring lancet. By this means I have frequently succeeded in extracting from 12 to 20 ounces of blood, which has acted like a charm, by relieving the engorged vessels of the inflamed membrane. The whitish or sometimes yellowish appearance, depends upon the effusion of coagulated lymph deposited during the acute stage of the disease. When the absorption of this does not progress freely, and the eye fails to assume its accustomed lustre and transparency, I blister a semicircle below the eye, one and a half inches in diameter, by applying daily with the point of the finger, a mixture of three parts of the common blistering preparation as obtained from the druggists, and one part Venice turpentine. Sometimes the other membranes of the organ become diseased from similar causes, to remedy which, the foregoing treatment as de-

tailed will be applicable. Care should be observed in not too suddenly exposing the patient to a strong light, high food, or active service.

Thus I have given you, as our Buckeyes term the science, a chapter on "horse-doctoring," and if you perceive anything in it that will repay you for the trouble, you are at liberty to publish it, with the promise, if it meets your approbation, of resuming the subject in some future number. ANDREW CAMPBELL, M. D.

Middletown, Ohio, February, 1843.

American Agriculturist.

BLIGHT IN PEAR TREES.

In the August No. of Vol. I., of the American Agriculturist, I find a notice of the blight in pear trees. I will give you my observations on that subject the past summer, and although very imperfect, they may throw some light on a subject that is enveloped in mystery, notwithstanding all the numerous causes and preventives that have been published. On the 23d of May last, I was observing a pear tree, some of the branches of which were dead, others with the leaves turning brown, the fruit dropping off, and what is peculiar to this disease, the branches in another part of the tree appeared perfectly healthy and vegetation in full vigor. I commenced paring off the bark on the diseased branches, which presented quite a red appearance, and in places a reddish liquid was exuding through the bark. In these spots (after taking off the outer bark) there was a very small hole about the size of a number 10 sewing-needle, and on removing the inside bark to the wood, there the little destroyer was ensconced, feeding on the life of the tree, to which they must be a deadly poison. They were near, and in the body, and for several feet up and down, the bark and wood were stained as above. I shaved the bark all clean where the tree was affected, which was on one side from the roots to the branches. I found only six of the insects; they are inactive, about the size of the hole mentioned, and above the sixteenth of an inch in length. They have six legs, the sides a deep green, the rest part of a brownish color. They insert about half the length of their body in the wood. I was pretty well convinced at the time, that these insects were the cause of the disease, but they may simply be the effect of it. They do not appear to be a migratory insect, for there were other pear trees standing within fifty feet of this one, unaffected two years ago. The tree which stood near this one died branch after branch, until the top was all cut away. Now this is one stage of the insect; and if we can find out its habits, there will be some chance for a remedy.

Professor Main, in his excellent treatise on the Physiology of Plants, mentions this disease, called American blight, and states the cause to be a very small insect, which, in its early stages, is not discernible with the naked eye. He calls it the *coccus*, or *Mealy aphis*, or a species of the *Cochineal* fly of commerce. The effect produced coincides with my observations; but the insect as I saw it differs in color from the one he describes as doing the mischief. He says they are so light that they are easily wafted from tree to tree, which can not be the case with this one I speak of. Apple trees are subject to a similar disease, and I have discovered the red juice, and the red appearance of the bark and wood, but not the insects.

There is another insect that works upon the pear tree, giving it the appearance of blight, but it is not the cause of the destruction of our pear trees. The fly deposites its egg in the tender part of the end of the twigs, and hatches into a brown grub. When full grown, it is about an inch in length. It eats out the wood, and leaves the bark entire for its habitation; of course the twig dies, the leaves turn brown, which gives it much the appearance of blight. I have cut off these twigs and found that they were hollow for six or eight inches. I can tell you nothing about the habits of this insect.

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TO DESTROY BUGS ON POTATO VINES.—An old gentleman informs me he has completely mastered the potato bug, by boiling up the roots of the mullen, and sprinkling the liquor on the tops early in the morning. He says it has the same effect on tomato vines.

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REMEDY FOR SORE TEATS AND INFLAMED UDDERS.—White lead and sweet oil are excellent for cracked or sore teats of milch cows.

Flax seed oil, well rubbed on the udder when inflamed and cracked, will allay inflammation and soften the hardness of the bag. Rub well twice a day until the inflammation subsides.

With much respect,

E. CARPENTER.

American Agriculturist.

CURIOUS METHOD OF PLANTING CORN.

Mr. John W. Sweet, of Tyringham, Berkshire county, informs us that he plants his corn in the following manner, and has realized 110 bushels shell corn to the acre.

He spreads what manure he intends for the field on the surface of the green-sward; then he plows the land into ridges about three feet apart in the fall—each ridge or row being made of two back furrows turned upon a narrow strip of sward which is not disturbed. In the spring he rolls and harrows these ridges, and on the top of each ridge, 12 or 14 inches apart, he plants his hills of corn, three or four kernels in the hill, and cultivates the corn through the season with the hoe, cultivator and plow, as much as he deems necessary. In this method, he remarked that he was not troubled with weeds or the drought.

In the fall, as soon as his corn is ripe, he gathers the ears, then pulls up all the corn stalks and lays them down lengthways between the furrows, and then splits the ridges with his plow, and covers these stalks up completely. Thus is made his ridge for his second crop of corn, to be planted the succeeding spring. The 110 bushels was the second crop planted over the buried stalks.

The above is sufficient to give the reader an idea of this system. He contends after the first crop he wants no more manure for his corn except the stalks applied as we have described.

It is quite probable, the three sods and manure being under the corn the first year, that while these are undergoing decomposition, being the whole period of the growth of the corn, the crop will suffer less from drought than it would were there no vegetable matter beneath it to attract and detain moisture till its decomposition is completed.

As to the fact that cornstalks are the best manure for corn, the idea is strictly philosophical, and is fully sustained by chemical analysis.—The doctrine seems to be well settled, that each crop requires its own peculiar food, and unless the soil contains this, the crop will not flourish. Hence the necessity of rotation of crops, or the well established fact, with practical men, that potatoes will not thrive for many years in succession on the same piece, because the crop has already exhausted the soil of the peculiar food of the potato, while some other crop requiring a different kind of food from what the potato requires, will succeed well on the same land where the potato crop has failed. Thus as the ox and the sheep, when put to the same stack of hay, the one will eat what the other leaves; so it is with plants.

Now, if you shoot a partridge, and cut open its crop, and find in it acorns and buds, you at once infer that acorns and buds are the natural food of the bird. So when by chemical analysis you ascertain the precise elements of which corn stalks are made, you have ascertained precisely what kind of food the corn crop requires. Now as corn stalks contain the very elements of the food required by the corn crop, and return to the soil all the substances of which they exhaust the soil, the chemistry of agriculture teaches us that corn stalks, while undergoing decomposition, furnish the growing crop with those very gases required for the elaboration of the solid stock and ears.

But this is not only the conclusion of science, but a universal law of the vegetable world, by which an all wise and bountiful God has provided that each precise species of plants shall be reproduced and perpetuated. Thus the forest land, for centuries subject to a mighty growth, from year to year, not only increases in fertility, by an annual top-dressing, fitted to the very purpose for which it is wanted, and composted by the unerring hand of Deity, but also, from year to year, has something to spare for the good of man and beast.

Thus in the vegetable as in the animal world, there is a wise provision, that each shall be sustained and reproduced; and as these natural laws are more and more developed by science, we may expect the purposes of Infinite Wisdom, as to the vegetable world, will be less and less frustrated by the hand of unskilful culture.

Boston Traveler.

MANAGEMENT OF BEES IN THE SPRING.—If the hives are kept in the shade, and where it is rather dark, bees will not attempt to go out till they can do it with safety; but if the sun shines on the hive, it makes a milder climate in and around the hive, than there is out in the fresh and chilling breeze, and the bees will be induced to go out when it is too cold, and becoming chilled they fall on the snow or cold ground and die by thousands; and by these revivals they will be more in action and consume more honey

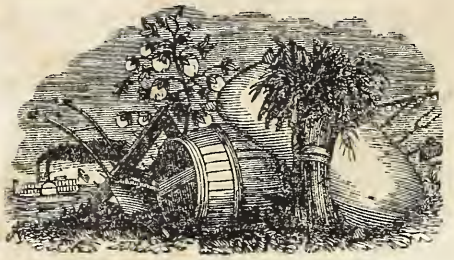
In the spring, when warm weather commences, or just before, if any one can guess aright in such a season as this, take out the board on which the hive sets, scrape off all the dead bees &c. and wash it thoroughly. Then let it dry and wash it over with a whitewash of lime with a good lot of salt in it, even more than will dissolve. Whitewash also the lower edge of the hive, and up in the hive to the comb. The whitewash is very acceptable to the bees and they will eat it freely.—*Boston Cultivator.*

MANURE.—Put on your land all the manure that can be scraped from your premises, or that you are entitled to from the road. Leave not a particle in the barn yard. It matters not how coarse or long it is, if you can plough it in. All you get from it before another season is clear gain, for it will lose but little more under the ground with a crop over it, than exposed to the action of the sun and rains in the yard. If it cannot be used, place it in heaps and cover it two feet thick with earth, which will inhale and retain most of its enriching gasses till wanted.—*American Agriculturist.*

VINEGAR.—Get a good cask and put in into your cellar. Procure a gallon of good vinegar, and let it stand in your cask a day or two, occasionally shaking it around the cask. You may then commence filling up your cask gradually with whiskey and water, in the proportion of one gallon of the former to eight of the latter.—It is best not to fill it up too fast at first. By this process you may always keep an abundant supply of the purest vinegar.—*Alb. Cult.*

☞ In an experiment of sowing corn *broadcast*, on the 1st of June, at the rate of one and a half bushels per acre, on rich land, Gen. Harmond, of Wheatland, Monroe county, New York, obtained 18 tons of green stalks per acre. The stalks were small, and almost entirely without ears, and so full of saccharine matter, that the cattle ate them perfectly clean when dry, though they were not cut up fine. The yield was estimated at six tons dry fodder per acre, was raised on a clover sod turned over and sown the last of May, and the corn cut September 15. The saccharine matter, which goes to supply the corn in the ear, is retained in the stalk when not suffered to ear, and materially adds to its nutritive properties.—*Am. Agriculturist.*

"In matters of business, if you can help it, as far as possible never commit yourself by speaking first; and on no account commit yourself by speaking hastily."



WEDNESDAY, APRIL 19, 1843.

BACK NUMBERS.—All new subscribers to the "Southern Cultivator" can be supplied with the back numbers.

DO YOUR WORK WELL.

With whatever justice this remark may be applied to all the vocations of men, there is certainly no pursuit to which it applies with greater force than to that of agriculture. Upon its strict observance success in every department of business depends, and it is, therefore, a maxim of great importance to all classes of business men, and particularly to farmers, because of the almost certain reward it brings to labor. We cannot, therefore, at this time, when all are industriously engaged in the labors necessary to the rearing of another crop, impress it too earnestly upon the consideration of the planter. It makes an appeal not only to his interest, because of the increased production of his farm which it brings, but it promises a rich reward in the happiness and comfort and ease with which it encircles the family group;—for wherever there is a consciousness of having discharged well and faithfully whatever duty our business may have imposed upon us, there is much food for high and unalloyed enjoyment; and no man enjoys more the felicity of such a conscientious discharge of duty than the farmer. The fruits of his labors are ever present to him, wherever he turns his eye upon his farm, and in proportion as he has executed well his work, does it delight him to review the fields which are ever teeming with the rich rewards they yield to his industry. Upon this subject the "Central New York Farmer" says, with much truth:—"Whatever system may be adopted, we cannot too strongly urge upon our farmers the propriety of doing their work well, and of cultivating their fields in a perfect and thorough manner. It is to be feared that the hard times will operate injuriously to agriculture, by preventing improvements which would be undertaken in more prosperous times. Every farmer must decide for himself how far his means will permit him to go; but we must be allowed to suggest that if the labor or expenses on the farm are to be curtailed, it is far better to let some fields remain uncultivated, than to undertake to cultivate much land with little labor. Here lies the secret of success in farming—for every man who has ever tried both methods, must be satisfied that it is better to cultivate a little land well, than a great deal imperfectly."

Industry and economy constitute the wealth of a nation.

MANURING—ITS VALUE.

The annexed communication of Mr. L. F. ALLEN, which we find in the American Agriculturist for April, establishes so fully how much may be accomplished in the resuscitation of exhausted lands by the application of manure, that we deem it peculiarly appropriate for the consideration of Southern planters, and therefore commend it to their consideration. In all the older settled parts of the Southern Atlantic States, the eye of the traveller is met at every step with thousands of acres of land, which, exhausted by our system of culture, are now not only unproductive, but a mere waste. That these lands, or a great portion of them, may be reclaimed by an enlightened system of culture, we have never entertained a doubt. To accomplish a result so desirable, however, resort must be had to manuring, without which we shall go on exhausting the lands, until our whole country will be little better than a barren waste, and our population seeking a better reward for labor in more fresh and fertile lands. Our whole system is wrong, radically wrong; the greatest evil of which is the persevering efforts of every farmer to cultivate too much land—so much, indeed, that they are unable to bestow that attention to the improvement of their lands, so necessary to increased production. This evil must and should be corrected, and planters should learn that it is much better to cultivate fewer acres well, which are all the time improving in value and increased production, than to cultivate much and have it exhausted yearly, and consequently yielding a poorer reward for labor.

A MARYLAND FARM.

AGRICULTURAL CAPITAL.—I have frequently, in reading over the foreign agricultural journals, been astonished at the lavish expenditure of capital on the landed estates in England, to promote their fertility, reclaim them from waste, or bring hitherto worthless tracts under cultivation, wall them in from the sea, and otherwise render them more productive; but on further examination my wonder has ceased, when I learn that in almost all cases of such improvement, the capital thus expended has produced a liberal additional interest on its investment. Probably no department of British industry receives so liberal an outlay of capital as that of its agriculture, affording in this particular a marked contrast to our American agriculture, which scarcely anywhere receives, and even then grudgingly, but an investment of moneyed capital sufficient to render our lands habitable, by a large proprietor. How often do we see proprietors with large landed estates lying in a ruinous, dilapidated condition, with but a few meager acres carelessly cultivated, around their dwellings, which last appendage may be even elegant and costly, while they have their tens of thousands invested in some bank or insurance company, or in bonds and mortgages, which, if withdrawn, and intelligently invested in the improvement of their estates, what noble revenues, as well as delightful employments would result from it, instead, as is often the case, of wasted fortunes from the insolvency of their debtors, and of personal ruin to many a worthy, and, under different circumstances, promising young man, resulting from idleness and dissipation, arising simply from want of employment!

Yet, with all our experience in these matters, hardly an individual can, at this time, make an investment of capital in agriculture, but, ten to one, he will be looked at with suspicion by his monied friends and associates, and either his judgment or his credit, according to his expenditure, is an once suspected. This we know to be all wrong, and the result of a perverted and false estimate of the true value of agriculture, and its safety and sure reliance for support, in all times and seasons, and the steady virtue and integrity of those who rely upon its bounties. How many, and many young men have I known, sons of rich, pains-taking fathers, who, indulged in habits of ease or of loose attention to business when boys, yet with sanguine expectations hereafter, on attaining their majority have been placed in business with a handsome capital, and in two, three or five years, as the case may be, had lost every farthing, and thousands besides, the property of others, who had confidingly trusted to their good management! Yet if these fond fathers had invested the same sums in good farms or plantations, and given their sons a plain agricultural education, ten to one they would have proved prudent, useful, thriving citizens, and good contented, and happy farmers, instead of, at an early age, broken down, disappointed and unhappy men. And all this from a false, imperfect estimate of the agricultural profession and its dignified and sturdy resources.

A MARYLAND FARM.—But to the main subject of my letter, instead of a homily on false principles and habits. In a brief journey to the seat of government, last June, when arrived at Baltimore, I made a diversion from my route, to visit a gentleman located near the Ohio railroad, about thirty miles west of the city, and to view his fine estate, and see his herd of beautiful Devon cattle, for the care of which he has long been celebrated. I found him on his farm of some seventeen or eighteen hundred acres of fine rolling land, a garden amidst a poorly cultivated yet pleasant country, years ago worn down by hard cropping of corn, wheat and tobacco, but of good natural soil and capabilities. Here, retired upon his estate, with a plain but beautifully situated dwelling and out buildings, and all the necessary appliances for a gentleman of wealth, education and leisure, he has for many years lived and improved his estate, until it has become one of the most valuable in the country; and from a condition which, when he first began its cultivation, was sterile, worn out and almost worthless. I spent a day in rambling with him over his fine domain, and never have I been more pleased and instructed. As this is a full and successful illustration of what may be done in almost all our Atlantic States, in the improvement of worn down soils, I trust I shall be excused for giving it somewhat in detail. When the proprietor first located on his farm it was entirely unproductive; yielding no crops, giving no manures, and possessing no resources of fertility, other than the muck or swamp-holes, occasionally interspersed among the woods and waste lands of the estate. After thoroughly examining the soil, which was found to be of various kinds, but chiefly a loose friable earth, based on a clay bottom, with occasionally tracts of stiff clay on the surface, he purchased a limestone quarry a dozen miles distance on the rail road, erected two large kilns at the depot near his estate, and went vigorously to work in getting out the stone, roading it to his kilns and burning it. This material, delivered on the farm, costs on an average twenty cents a bushel. The bushes and straggling woods were cut and made into fuel, the fields were squared out and put into shape, and the quick lime applied at once upon the land, in quantities of from fifty to two hundred bushels to the acre, no matter at what season of the year. When the lime was ready it was applied, by dropping it in heaps of five or six bushels each, and, as soon as sufficiently slaked by the weather, carefully spread on the soil. A great part of the land was so sterile that it had no sod upon it, and was sadly disfigured with gulleys made by the washing of the rains. In such fields as had a tolerable sod of grass, a slight dressing of barn or stable manure was obtained and applied with the lime, which being ploughed became at once productive; but where no manure was placed in aid of the lime, it was left untouched to dissolve with

the rains and snow, and incorporate as best it might with the soil. Under this latter process the soil became gradually grassed over, and in two to four years, a fine coat of native blue grass (*poa pratensis,*) and white clover, (*trifolium repens,*) affording beautiful succulent pasture, covered the ground. When this grass coating is accomplished, the land is in proper condition for cropping, and, with a thorough ploughing, yields abundantly of all the grains and grasses grown in this climate. Where there is no vegetable matter in the soil for the lime to act upon, I conceive the lime must have drawn most of the fertilizing matter from the air, condensing the ammonia therein contained, which is brought to it by the snows and rains. Of course all that is thus procured, is so much added to one's wealth by a very moderate outlay. It also seems to predispose the materials of the soil to form those associations and tendencies which enable it to produce vegetation when in no condition to do so before.

In ranging over the estate, we examined particularly the land, from fields limed years ago, and in the fulness of their production, to those yet white with its recent application, and just looking green with the fresh verdue of the young grass. One field contained fifty acres of the most beautiful wheat I ever saw, promising to yield full forty bushels to the acre. Another, of seventy acres, was newly planted in Indian corn, and had a fine chocolate-colored soil, which had produced its sixty and seventy bushels per acre. The oat fields looked rank and fresh, and the grass lots for hay were, many of them, thus early, lodging with the over-growth of their burdens. Such timothy and clover, and such orchard grass meadows, are rare in that region. In short, by the application of lime in this manner, or without the aid of stable manures, all the cultivated lands were teeming with fertility and abundance. Hundreds of acres thus limed for years, now in beautiful pastures, had been untouched by the plough, and were grazed by herds of cattle, sheep and horses, rioting in its luxuriance. Eleven hundred acres had thus been limed, and new fields were waiting for this fertilizing stimulant, still in the process of application. I saw large tracts of land so sterile that no vegetation grew upon it, not even grass or weeds, separated only by a fence from those bearing the richest herbage. One had been limed—the other not.

I had never seen a specimen of agricultural improvement which had pleased or interested me more than this; and when, in addition to this teeming abundance, all the appliances of rural luxury and independence, buildings, orchards, groves and delightful scenery were added, the picture was full of admiration. Yet all this beauty, fertility and abundance was created by the simple application of scientific principles, with the aid of moneyed capital, to this body of otherwise inert and lifeless soil. The proprietor told me that his friends and neighbors had jeered, ridiculed and blamed him for thus squandering, as they termed it, his money on such worthless experiments; but the result has equalled his warmest anticipations, and he has now the solid pleasure of looking at an estate, which when he took possession of it, was absolutely worthless in its income, and not saleable at $5 the acre, now worth eighty or a hundred. In addition to this improvement of the soil, ten or a dozen miles of durable and substantial post-and-rail fences of chesnut and cedar have been built, separating the farm into large and convenient fields, with commodious lanes and entrances leading from the mansion house and farm-buildings. Ample hay and grain barns are erected in many of the enclosures, for securing the crops and feeding the stock; and altogether this may be termed a *pattern farm* of the highest order.

The question may naturally enough here be asked, how should this remarkable improvement occur in this country, and by one who was not bred a practical farmer? The answer is a simple and easy one: by the application of the right principles to agricultural improvement. This gentleman possessed education, enlarged and intelligent views of agricultural improvement, had travelled extensively abroad, and profited by his foreign observations; and after returning to his native State, instead of slothfully sitting down in idleness and inglorious ease, at once applied himself to the improvement of his property, and in giving an example to his fellow citizens of incalculable value. And yet millions of acres in that fine region, now yielding little or no income, might, by a very moderate outlay of capital, be made equally productive. But more of this hereafter.

CURE FOR PILES AND CATARACT.

Mr. John J. McCaughan, of Mississippi, has communicated to the American Farmer, the following remedies for Piles and Cataract.—The first we have heard recommended on several occasions before, as being a very efficacious remedy; but we apprehend that Mr. McG. has misapprehended the disease generally designated cataract of the eye or confounded it with some other, and we therefore infer that his remedy applies only to those diseases of the eye where some excrescence has grown on the outside of the eye ball.

Cure for the Piles.—Carrying the common buck-eye in the pantaloons' pocket, will cure the piles or any other inflammation about the anus. I cannot give a reason for it, but it is nevertheless certain—try it.

Cure for the Cataract in the Eye.—The root of the weed commonly called the *devil's shoestring*, soaked in water and used as a wash, will cut the film (called cataract) off the eyes of man or beast, more effectually than the surgeon's knife, without pain, risk or apprehension."

COTTON SEED FOR COWS.

The following experiment of giving boiled cotton seed to cows, was communicated to the American Agriculturist, in February last, by Mr. Thomas Affleck, of Mississippi. We hope it will not be forgotten by our planters, who can so readily test its value.

Cotton Seed for Cows.—I am now feeding to my cows, boiled cotton seed, with a little chopped corn added. It gives the butter a rich flavor and fine yellow color, and I may safely say, doubles the quantity. The cotton seed must be *well-cooked* though, which a few minutes boiling will do.

GOOD ADVICE.

The following extract from an address delivered before an Agricultural Society in Maryland, will apply with much force to the meridian of Georgia, where, for a series of years, so much time and money have been consumed by the indulgence of luxurious habits, bringing in their train neither that happiness, ease or quiet, in the pursuit of which all are so eager.

"Fellow farmers, let us then, in these times of pressure and pecuniary embarrassment, get rid of every species of property which is not profitable; get rid of our luxurious habits; abandon the fashionable follies of the day; lay off all unnecessary expenses, and return to the plain, unsophisticated customs of our forefathers. Let industry and economy be your watchword, and let it be practically seen and felt in your household. Work less land, and take better care of what you make. Make an annual investment in the improvement of our farms. Let us give up the fashion of selling nothing that we can consume, but rather let us waste or prodigally consume nothing we can sell. By such radical changes in our course of life, and in our system of farming, that peace and plenty, that contentment and comfort, that ease and happiness which is our birth-right as tillers of the soil, will again revisit our homes, and the bright sun of prosperity will again shine over old Maryland in all its wonted effulgence, and light up with happy smiles the countenances of her independent sons and her beauteous daughters."

WATER MELONS AND CANTELOPES.

In the Farmers' Register, we find the following memoranda for the cultivation of these delicious melons, by a gentleman who, in the 43d degree of north latitude, frequently raises melons to weigh from 30 to 40 lbs. each. Although in our climate the water melon often attains a much greater weight, with much less care and attention, we doubt not if the experiment be made upon the plan suggested by the writer, they would grow much larger than now. The system of pruning adopted by this writer, if practised at all by those who cultivate in this climate, is only to a very limited extent, certainly contributes much to the enlarged size of the melons, and we cannot perceive how it should impair the flavor. We hope, as it is not yet too late in the season, some of our friends will make the experiment with a few hills, and give us the result, comparing its benefits with the culture now generally practised.

Holes, 2 feet diameter, 20 inches deep, filled one foot with garden rubbish and unrotted manures, beat down hard, and watered (two or three buckets full,) then filled to the top with rich soil; on this spread an inch of fine compost or well-rotted manure, compact, but not hard. Stick the seeds, (say twenty or thirty to a hill,) the upper end of the seed to be a little below the surface of the compost; brush over the hill with the hand, so as to fill the holes made by the fingers; then cover the hill with an inch of clear *sand*, often watered. In Alabama, I should think, grass turf, (the grass side down,) would be a good filling for the 12 inches.

Hills, 10 feet apart, 2, 3, and at most 4 plants only to remain in a hill, and standing apart from each other; thinned by the time the plants have six leaves.

If the season be dry, dig down by the side of the hills nearly as deep as the bottom of the holes, and put in a bucket or two of water, filling the hole after the water is absorbed; as soon as the yellow bug is gone, take away the sand and supply its place with soil. This is all that can be done in the hill.

When the plant has six leaves, take off the centre shoot with the point of a sharp pen-knife, and when the lateral shoots are six inches long, take off all but three: when these begin to fall to the ground, secure them down with cross sticks, and as they advance, spade up the ground foot deep in advance of the vines.

Once in every three or four feet put a shovelful of soil on a leaf joint of the vine, (not covering up the leaf,) and press it down gently with the foot on both sides of the leaf; if this is kept moist it will take root. The ends of the vines to be kept on the ground by cross sticks.

Let the vines spread from the hills so as to cover the whole ground.

If the side branches of the main vines are inclined to head up, and not to keep to the ground, take them off, say a foot from the main vine.

All pruning to be done in the middle of the day when the sun shines.

Let no melon set within four or five feet from the root; and then only one on a lateral branch, three to a plant. Let the vine run on as far as it will, keeping it to the ground: permit no melon to grow that is deformed; pull off no male blossoms.

When the melon is nearly to its size, others may be permitted to set on the same vine, and a

second crop raised. I should think the vines might be made to grow from twenty to thirty feet long.

Great care should be taken that the vines are not moved or trod upon.

The *early* but *small* melons. Let the melon set at the 2d or 3d leaf-joint from the root, and take the vine off two joints beyond the melons.

To increase the number of cantelopes. Take off all the melons that set within two feet of the roots.

These may be planted six feet apart, 4 to the hill, and require no particular attention.

Sand on the hills is one of the best preventives against the yellow bug, though not entirely a preventive.

It is useful to plant pumpkin or squash seed near the hills for the bugs, taking care to pull them up as soon as the bugs are gone.

Cantelopes should not be planted nearer than 20 yards to muskmellons or cucumbers.

To improve your seed save none but from the very best melons.

Keep a record if you wish to know certainly the results.

SOMETHING ABOUT HOGOLOGY.

Mr. Editor—As I wanted to send a letter to my old friend Duthan Peabody, who lives somewheres up about Turkey Hills, on the business of Hogology, which is rather a public concern—and as Duthan can read print better than my poor writing, I thought he would like to read a letter to *himself* in your Gazette, knowing that you would put the stops, the spelling, and the grammar all right, I thought I would send it in that way. Then there's the postage on a business letter both ways—some saving in that, you know—hope you will excuse the liberty I've taken.

—

Milford Farms, January 10, 1843.

Friend Duthan—As I am calculating to happen along your way the first good sleighing, and of course shall make you a kind of farmer's call, I thought I would send this as a sort of forerunner, to put you in mind of some notions of mine about farming. You know I am a great lover of hogs, (though not half so hoggish as some of my acquaintance,) and as it's the time among us Yankees to have a slice or two of good broiled ham on the breakfast table when a friend happens in, it occurred to my mind to improve the opportunity to say a few things to you about hogs, and the breeding of them.

And firstly, do you know what's the best, the genteelest, and most fashionable of the whole hog family just now? There seems to be a great many different notions about what it takes to make a good genteel hog, and about the character of the different families—there's great contention about it already. If they only knew what is written, and printed and said about them, they'd prick up their bristles and make war at once. But after all, the hog is the farmer's friend, when he has a genteel, good breeding. But your saucy, ill-bred things are nothing but a torment.

Now, if you want to make a figure in the world, friend Duthan, especially in the farming line, let me, after all my reading and experience on the subject, recommend to your notice the *Berkshires*. I know you, like some other folks, have a sort of antipathy against British hogs, British short horns, and British any thing; (a little of the old Revolutionary feeling I suppose;) but let all that go—the Berkshires are the finest fellows that wear bristles for all that. If you will believe me, it takes a great while to make a genteel, gentlemanly hog like the Berkshires. They are none of your upstarts. It is education makes the man, you know—and so with the hog. By education, I mean, *drawing out* and *improving the faculties* and good qualities.—Why, some of the first and most learned farmers in Old England, lords and noblemen, have been educating the Berkshire family for more than forty years, and their pedigree is as legitimate and canonical as that of the Royal Family—though the original stock was, to be sure, of the Plebian caste, like all the nobility. Mr. Allen of Buffalo, has been on the ground, and traced out their whole rise and improvement, and has given us chapter and verse of all the history for about half a century, of their education, manners, habits and qualities, and can now introduce you to some of the most accomplished and elegant fellows that ever went on four legs.—Why didn't you read what the Committee said about them at the Hartford and Albany Cattle Shows? They made them out the most complete *gentlemen* in their appearance and behavior.

The science of Hogology is so perfectly understood in Old England, that they can educate them by good breeding, into any form, size, color and disposition they choose. They have, as Mr. Allen says, given the Berkshires more good points than any of the Swinish family. They have educated off, already, most all their hair and bristles, two-thirds of their skin, and about half their bones *out*. They have given them size, great r than an Alderman or Lord Mayor of London, "symmetrical, fine-formed limbs, fine, thin, glossy hair, soft lady-like skins, and great hardiness of constitution. Made them prolific breeders, best of nurses, of thrifty growth, early maturity, easily kept on grass, will fatten at any age, their dispositions are quiet, powers of endurance great, and beat all nature to travel, especially when going to Fairs. And besides and above all, their meat is of the *best kind*, lean where they should be, and fat where you want it—hams, shoulders and jowls, lean, muscular and delicate—broadsides the best of mess. Call them English or British, or what you please, the Berkshires are all they are cracked up to be.

Now, Friend Duthan, as they say the Connecticut people are the best educated of all the world, why should not we keep our hogs as much above *all others* in that particular? The science of Hogology in England has done wonders, far beyond Craniology or Phrenology—and we never can be up to the British in that science till we have a *Hogological Institute*.—But there's such a confounded notion in our country of running every thing into Old Schoolism, New Schoolism, Millerism, Puseyism, Perfectionism, Sociniamism, and every sort of isms, that I dare say such an institute would soon be upset by some *ism* or other. The professors would be getting by the ears about the doctrines, or some other principles in Bumpology, and frustrate the whole plan. But I should have no objections, however, to a little perfectionism in such an institute, for the Berkshire family are considered a good deal in that line now; and I think it would go much better in Hogoly than Theology, if they would not spin it too fine—for its just what Connecticut wants.

Now, Friend Duthan, think of this matter, for I must conclude this long concern by summing up my ideas in a sentiment for the occasion. "*The Berkshire Family*—Long lives and perfection to their posterity." Excuse my verbosity on this favorite topic of yours and mine, and believe me sincerely,

Your friend,

Obadiah Fairflax.

Central New York Farmer.

Ploughing for Corn.—The American Farmer says:—In ploughing up corn and oats ground, the farmer should neither spare his team or his plough, as the deeper he goes the better prepared will his soil be to sustain the crop sown upon it. It is a fact that cannot be disputed, that corn planted on ground deeply ploughed, always stands drought better, looks green and healthy longer, and nine times out of ten will yield more fodder add more grain, than that which is planted in shallow plowed ground. There is no mystery as to the reason; it is as obvious as that two and two make four. The roots penetrate beyond the depth at which, by evaporation, earth becomes deprived of its moisture, and there find in store for them that necessary ingredient to healthful vegetation, and thus escape from the evil of being parched up for the want of water.

Cure for Worts in Horses and Cattle.—A valuable friend of great experience in horses and cattle, (says the British American Cultivator,) and who has imported and bred many of the best in the United States, says that a strong wash made of pearlash and water, applied thrice a day, will remove tumors and worts.

Cultivation of the Turnep.—These are usually sowed, says a Mississippi correspondent of the American Agriculturist, here in August and September, on ground enriched by penning the cows and other stock upon it some time previously, or what is still better, on a piece of newly cleared land. But I prefer to them, for cows, *raw* sweet potatoes and cooked cotton seed.

If you would teach your cattle to be mischievous, put up a low or a slender fenee at first, and raise or strenghten it as they become expert in jumping.

AUGUSTA MARKET.

Tuesday p. m., April 18.

Cotton—Since our report of last Tuesday evening our cotton market has been very quiet, with but little doing, and no change save that which always marks a dull, inactive market; we therefore continue to quote 4 to 6¼ cents as extremes of the market—principal sales 4¾ to 5¼ cents.

Exchange—The market is abundantly supplied with exchange, which is sold at par on Charleston, Savannah and all the Northern cities. Central money ranges from 25 to 30 ℔ cent discount. State 6 ℔ cent Bonds are in demand at 50 cents on the dollar. Alabama notes 20 @ 25 ℔ cent discount.

CONTENTS OF THIS NUMBER.

	PAGE.
Progress of Improvement; Improve your Farms	49
Salt as a Manure	50
Agricultural Education; Manure; Ink	51
Preparation of Seed Wheat to prevent Smut; Mons. Sckruitz's method of preventing Smut; Industry; Cure for Inflamed Eyes of Horses	52
Blight in Pear Trees; to destroy Bugs on Potato Vines; Remedy for Sore Teats and Inflamed Udders; Curious Method of Planting Corn; Management of Bees; Manure; to make Vinegar; Sowing Corn Broadcast	53
Do your Work well; Value of Manure; a Maryland Farm	54
Cure for Piles and Cataract; Cotton Seed for Cows; Good Advice; Watermelons and Cantelopes	55
Hogology; Ploughing for Corn; Cure for Worts on Horses; Cultivation of the Turnep; Augusta Market	56

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SOUTHERN CULTIVATOR.

VOL. I. AUGUSTA, GA., APRIL 26, 1843. No. 8.

MR. FOOTE'S PRIZE ESSAY.

"A good agriculturist will neglect no means of forming dung heaps; it ought to be his first and daily care; for without dung there is no harvest."—*Chaptal.*

PRELIMINARY PROPOSITIONS.

That vegetation annually appropriates to itself, and thus removes from the soil, a certain amount of nutritive principles; and that the removal of a succession of crops, without some compensation in the shape of manures, will gradually impoverish, and, if carried far enough, ultimately exhaust the soil, are propositions so manifestly true as to require no illustration.—We every where see that the progress last indicated, is sure to be followed by a gradual change in the color and texture of the soil, and by a proportionate diminution of its vegetable products, until, if not arrested, the final result is absolute sterility.

The truth of the converse of these propositions is equally evident. Take an old field which has been reduced to barrenness by an unrelenting system of cropping without compensation, and restore to it a portion of those vegetable matters by the abstraction of which its poverty has been occasioned, and amendment is at once the consequence. Repeat the operation and a further progress towards fertility is made; extend it sufficiently far, and the face of nature is entirely renewed, and every symptom of a full recovery exhibited.

From these, and other kindred considerations readily suggested to the reflecting mind, we draw the following

INFERENCES.

1. That the appropriate food of vegetation is for the most part, neither more nor less than the ultimate results of vegetation itself, modified by the action of the animal organism and the several processes of fermentation.

2. That a limited amount only of the food of vegetation is contained in any given quantity of soil.

3. That a single crop cannot be removed from the soil, without diminishing, to a certain extent, its capabilities for supporting vegetable life.

4. That an uninterrupted cropping of any given portion of soil, without remuneration, will at length infallibly reduce it to sterility.

5. That the original fertility of any given portion of soil can only be maintained by faithfully restoring to it, in the shape of manures, an amount of vegetable matter equal to that which is annually abstracted from it.

6. That an *impoverished* soil can only be *restored* to its original fertility by the application to it of an amount of vegetable matter *greater* than that which is annually taken from it.

7. The most exhausted lands cannot only be regenerated, by sufficiently increasing the proportion of vegetable matter in the soil, but raised above the highest point of their original fertility.

8. That the deteriorated condition of the major part of our cultivated soil, is proof conclusive that all the resources of the farm have not, in general, been put in requisition.

9. That the secret of all good farming lies in the skillful management and judicious applica- of *home made manures.*

10. That it is of the highest importance to the agriculturist to study more carefully the nature of the soil, the wants of vegetable life, and the mutual relations and dependances of the soil and vegetation; and above all to cast about him and explore the sources of those animal, vegetable and mineral substances, the proper application of which to his cultivated fields, is not only an indispensable prerequisite to their increased fertility, but the certain harbinger if coupled with economy, of competence at least, if not of affluence.

DEFINITION OF MANURE.

Manure is a term of almost unlimited application—embracing an immense number and variety of substances—including, indeed, whatever can be named in the animal, vegetable and mineral kingdoms capable of improving and fertilizing the soil. Says the author of British Husbandry, "Any thing whatever may be called manure, which, when applied to the soil, rectifies its defects, corrects any bad quality, or either stimulates it to yield or stores it with nutriment." Any class of so heterogeneous a mass of substances which should at once prove satisfactory to the agricultural chemist, and intelligible to the merely practical farmer, cannot, in the present state of agricultural science, be attempted with any prospect of success. A practical classification alone, however, would seem to be called for on the present occasion, and that which is regarded as the simplest will be chosen.

CLASSIFICATION OF MANURES.

From the earliest speculations on the nature of manures, down to a very recent period, manures have been divided into two classes, nutrative and stimulative, or such as furnish the direct food of plants, and those which act as stimulants, or excite to take up and assimilate such kinds of food as is presented to them. In the first class have been placed all decayed and vegetable matter, farm-yard manures, animal excrements, night soil, and such other matters as having been derived from, are considered as capable of being reconverted into vegetable matter. In the second class it has been the custom to place gypsum, lime, such salts as are found to produce a favorable effect on vegetation, as the phosphates of lime in bones, and the nitrates existing in saltpetre, soda, &c.—(Albany Cultivator, vol. 8, p. 95.) To these may be added a third class, consisting of variable mixtures from the two former with several kinds of earth, and denominated composts. Thus we have the simple classification of all the manures into, 1st, *Nutrative Manures*, 2d, *Stimulative Manures*, and 3d, *Composts.*

NUTRATIVE MANURES.

The great depositories of the manures of this class are, the *barnyard*, the *piggery* and the *privy vault*—each of which will claim our attention, for a moment, in relation to the causes which operate to diminish the amount and value of their contents.

CAUSES OF WASTE.

How, then, are the contents of these depositories chiefly liable to waste? We answer, 1st. By *infiltration*, or soaking away into the earth; 2d. By *evaporation*, or being taken up by the sun and winds; 3d. By excessive *fermentation*, in which the heaps accumulate so great a degree of heat as to dissolve the salts which they contain, and dissipate them in the form of gaseous exhalations; and 4th, by *drainage*, or flowing away in the currents of water which are suffered but too often to despoil our barnyards of their richest treasures, and to defile our highways, and clog up our ditches with that which might otherwise fatten our cornfields.

REMEDY FOR DRAINAGE.

To close effectually the last named wastegate, it is only necessary to excavate the central portions of the yard as to form a sufficient reservoir for the liquids that will naturally find their way into it, and carefully convey away the droppings from the roofs of the buildings, by good conductors, and to turn the course of any superfluous waters from higher grounds, by effective trenches.

REMEDIES FOR INFILTRATION AND EVAPORATION.

To guard against infiltration, let the yard, and especially the excavated portions of it, receive a thorough coating (if nature has not been beforehand in supplying one,) of the purest *clay* at command; and to escape the mischiefs of evaporation, furnish it with an abundance of litter, such as refuse straw, oats, weeds and leaves from the forest, together with muck, surface soil from the road sides, hedges and ditches, or any other convenient matters of a porous nature, to absorb the liquids, and protect the whole mass from the influences of the atmosphere. A further security will still be found in occasionally strewing the yard with plaster, which, by combining with the volatile portions of the manure, and converting them into salts not volatile, will rob the atmosphere of its prey.

REMEDY FOR FERMENTATION.

Having taken the above precautions, little danger need be apprehended from excessive fermentation, except in case of considerable piles of horse dung; and here it will be very easy to avert the evil, either by occasionally spreading open the heaps, or, what is far better, by interlarding them at proper intervals, with muck or surface soil, which will not only effect the object in question, but absorbing the juices of the pile, become of equal value with the dung.

VALUE OF LIQUID MANURE.

It will readily be perceived that the principal effort of the farmer, in the preservation of his manures, must be directed to their *liquid* portions—these portions not only being by far the most exposed to loss, but possessing *a superiority in value which renders their loss irreparable.* This last sentiment, involving as it does a subject of vital interest in agriculture, we shall take the liberty of illustrating by the introduction of several authorities.

"The greatest value should be attached to the liquid excrements of man and animals, when a manure is desired which shall supply nitrogen to the soil. The greatest part of a superabundant crop, or, in other words, the increase of growth which is in our power, can be obtained exclusively by their means. When it is considered that with every pound of ammonia that escapes, a loss of sixty pounds of corn is sustained, and that with every pound of urine a pound of wheat might be produced, the difference with which these liquid excrements are regarded is quite incomprehensible. In most pla-

ces only the solid excrements impregnated with the liquid are used, and the dung hills containing these are protected neither from evaporation nor from rain. The solid excrements contain the insoluble, the liquids all the soluble phosphates, and the latter contain likewise all the potash which existed as organic salt in the plants consumed by the animal."—*Liebig's Organic Chemistry, pp.* 191.

"Liquid manure consists in a great degree of the urine of various animals, which during its decomposition, exhales a larger quantity of ammonia than any other species of excrement.—Now all kinds of corn contain nitrogen, and consequently any manure which yields a ready supply of ammonia, must cause a fuller developement of those parts of the plants which are of the greatest use to man. Even the kind of animal manure usually employed in this country owes its efficacy, so far as it is dependent on the ammonia present, to the urine, rather than to the solid excrement of which it is made up, and hence becomes materially deteriorated in this respect, when the more liquid portions are allowed to drain off from it."—*Danby's Lectures on Agriculture.*

"The quantity of liquid manure produced by one cow annually, is equal to fertilizing 1¼ acres of ground, producing effects as durable as do the solid evacuations. A cord of loam, saturated with urine, is equal to a cord of the best rolled dung. If the liquid and solid evacuations, including the litter, are kept separate, and soaking up the liquid by loam, it has been found they will manure land, in proportion by bulk of 7 liquid to 6 solid, while their actual value is as 2 to 1. One hundred pounds of cow's urine afford 25 lbs. of the most powerful salts which have ever been used by farmers. The simple statement then in figures, of the difference in value of the solid and liquid evacuations of a cow, should impress upon all the importance of saving the last in preference to the first.—*Dana's Muck Manual, p.* 171.

"Urine is always a most valuable manure.—No farmer should permit it to run to waste, but should so prepare his cattle yard by loam or swamp muck, and by plaster, as to save these invaluable products of his stables, and of his own dwelling. As the urine is commonly mixed with the solid excrements in the barn yard or cattle yard, it increases the value of this manure, it promotes its decay, and adds its own salts; but if the whole is exposed to the influence of atmospheric agents, it facilitates their action, and aids in depreciating its value; hence it is generally wholly lost to the farm. Farmers ought to know this, and to be apprized of the fact that at least one-half of their manure is wasted."—*Gray's Elements of Agriculture, p.* 502.

"Upon nearly all our farms the dung of quadrupeds is exposed to the open air, without the protection of a shed, as soon as it is removed from the stables; and is thus washed by the rains, which carry off all the salts, urine and soluble juices, and form at the foot of the mass a rivulet of blackish fluid, which is either wholly evaporated or lost in the ground. In proportion as fermentation advances, new soluble combinations are formed, so that all the nutritive and stimulating principles of the dung gradually disappears, till there remain only some weak portions of the manure, intermingled with stalks of straw which have lost all their goodness.—*Chaptal's Agricultural Chemistry, p.* 55.

A VALUABLE HINT.

"To remedy as much as possible an abuse so injurious to agriculture, it is necessary at least to dig a deep ditch to receive all the juices which flow from the dunghill, in order that they may be used in the spring on upon the corn or grass lands; or that they may be preserved to water the grass lands with after the first mowing. A large cask fixed upon a small cart, and which can be filled by means of a hand pump, is sufficient for this purpose. Beneath the tap of the cask must be fitted a narrow chest about four feet long, with the bottom pierced with holes, through which the liquor may be scattered.—This mode of watering, when used after mowing, produces wonderful effects upon the crop of the following year."—*Ib.*

AN EXPERIMENT.

In confirmation of the statement last quoted, the writer may be permitted to notice an experiment with liquid manure made by himself during the past year. Some 150 gallons of liquid were dipped in the month of October, from an excavation beneath his horse stable, and evenly distributed over a small area (perhaps 20 square rods,) of old meadow land, the soil a stiff clay loam, on which but little grass had grown for four or five years. When that area was mowed about the first of August last, it was judged to yield at the rate of at least three tons to the acre! An increase of certainly not less than five to one, and attributable to no other assignable cause than that dressing of liquid manure, of which too a considerable portion must have been made of water.

[To be continued.]

BOMMER'S MANURE—NO HUMBUG.

The invention of Mr. Bommer is presented to the public under circumstances which ought to inspire confidence. If we were wholly dependent on Mr. Bommer and his agents for information respecting the efficiency and utility of his method, we might even in this case, regard it as entitled to a candid investigation, especially when it is understood that we know nothing in their characters calculated to excite our suspicions, or in the system of the process, incompatible with the principles of sound philosophy. As it regards Mr. Bommer's personal character, it may be safely asserted, that we know nothing against it, while the valuable improvement which he has introduced among the agriculturists of our country, very naturally inspires us with sentiments of profound respect for him as a gentleman of scientific research, and of a discriminating judgment. His theory has past the ordeal of a careful examination by disinterested gentlemen, whose attainments in science pre-eminently qualified them to trace its harmony with the most approved principles of philosophy. The practical utility of the system has been tested both by public and private experiments, and in every case where the principles of the theory have been fairly carried out, it has resulted with complete success. The advantages of the method are so diversified that they are not likely to be duly appreciated without a careful examination. While I shall take it for granted, that the importance of nutritious manure is generally acknowledged by the farmers of New England, it must be conceded, that in a majority of cases essential losses are sustained in this article for the want of a well adjusted system. The method of Mr. Bommer furnishes a system of the most rigid economy in saving every thing that is available, and in using all to the greatest advantage. The expedition with which decomposition is carried on by this method, has very justly attracted the attention of the public, and presents inducements for general adoption, which it would seem that the most inveterate prejudice could not resist.

If, in any case, it may be asserted with truth, that "time is money," it is emphatically true in respect to the time which is saved by this rapid process in converting articles, which are frequently wasted, into the most valuable manure, in a few days, instead of requiring a year to consummate the object in a manner far less effectual. It is certainly no trifling advantage which is derived from this method, that the germinating powers of all weeds, submitted to decomposition by this process, will be utterly destroyed; and that yard or stable manure, in which foul seed is suspected to exist, may be essentially improved in quality by this mode of management, while every kind of seed in the manure will be incapable of vegetating. In locations where sea-weeds or other vegetable matters are easily obtained, which are difficult to decompose by any ordinary process, Mr. Bommer's method must prove an inestimable benefit to such as avail themselves of its use. But if we add to the above the advantages of earth and liquid manures, and also Mr. Bommer's plan of augmenting stable or yard manure, and the process which will soon be communicated to the purchasers of his method of a cheap and expeditious mode of converting muck and peat into good manure, it will be difficult to conceive of the amount of profit which will result to community if these improvements should be generally adopted.—*Con. Farmer's Gazette.*

MANAGEMENT OF MANURE.

We remember the time when farmers used to let their heaps of manure remain through the summer, fermenting and sending off the gases, which are the finest and most valuable parts of the manure. Sometimes the heap would be nearly hot enough to produce spontaneous combustion. We once put some potatoes in a heap of fermenting manure to sprout them, and in a few days, on examination, we found that they were *done*, being completely roasted.

Besides the great waste from fermentation, the manure was drenched with rains; and the soluble parts, the best that remained, were carried away, and frequently deposited where they were not needed. Thus by "fire and flood" all the most valuable parts of the manure were dissipated and carried away. Then the manure was black and mellow, and farmers considered it in fine condition for Indian corn or other crops for the next season. So it was hauled out in the fall, and deposited in the field for that purpose. How much was lost in this way we cannot tell, perhaps one third by the escape of gases, and another third might be carried away in solution, for the stream from the manure was dark and rich.

Manure should never ferment without being well covered with loam or some substance to absorb the gases; and when applied to the soil, it should be covered immediately; and if the soil be light and porous it should be covered a good depth or the gases will escape. If manure in the heap is likely to ferment before it can be conveniently applied to the soil, and it be not convenient to cover it with loam, or anything to receive and retain the gases, it may be overhauled and exposed to the air to keep it cool. It is better to spread out manure before fermentation commences, though it will lose something by being thus exposed to the air, than to let it remain to heat in the heap. For when in a heap the decomposition is rapid and the loss great.—When spread out and exposed, the fermentation is slow and the loss in a given time comparatively small.

Some writers recommend preparing manure for crops by allowing it to ferment before applied to the soil, but this method is very injudicious, unless some method is taken to retain the gases. Partially decomposed manure is good to give plants an early start, but the support thus given soon fails, and if there be not other manure or rich soil, the plant fails in a measure before the crop is matured. We prefer applying manure before fermentation, that the gases may enrich the soil and make it light and mellow. In this case if there be not a rich soil to give the plants a start in the first of the year, it may be well to apply ashes or poudrette, or something to give them an early start, if any thing of the kind can be procured with economy.

We have found that though old manure gives the plant a good color and rapid growth in the first of the season, the crop is usually lighter than when manure is applied in its full strength, that gives an abundance of nutriment to the plants when the crop is matured, this being the time when it is most needed. When old manure, or fine compost can be conveniently mixed with new manure, they answer well, as one affords food for plants in the early part of the season, and the other in the latter part.

Boston Cultivator.

FRIENDLY ADVICE TO THE SMALL FARMER.

PRACTICAL DIRECTIONS FOR THE PLACE AND MANAGEMENT OF THE DUNG HEAP.

Farmers have generally found out the advantage of having a dung pit instead of a dung heap; but still the rich drainage of the dung is much of it allowed to run away. The urine from the stables, &c., does not half of it run into the dung, though it is the best partt,he essence of the whole; and the privy manure, which is better still, is mostly neglected altogether.

All drainings from the stables, cow houses and styes, should run into the pit, and the overflowings should be caught in another pit, to throw back in dry weather.

The following is a cheap and effectual method of doing all this:

When convenient, the pit should be on the north side of a wall or of some trees, to shade off the sun; or under shed, to keep off both wind and rain. But these advantages cannot always be had without too much cost.

Having selected the best place for your pit, first lay in way soil, peat, or any soil as different as possible from that of your farm, and give it a hollow surface like a great tea sauser. Upon this lay potato stalks, and any other vegetable matters, easy to ferment, and hereupon a layer of dung. Next a layer of vegetable matter, as peat, turf, bark, rotten weeds, ferns, leaves or any king of dead vegetable, to increase your quantity; and so every week, cover your dung from the stables, styes, &c., with three or four times as much dead vegetable matter; thus making up your heap in alternate layers. The urine should all run into the pit from stables and all, by narrow drains, where it will not be much exposed to evaporation; and another such drain should lead from it to a lower pit, to catch the overflowings when there are any, and keep them to throw back upon the dung in dry times. This lower pit should be deeper and smaller than the other, and must never be allowed to overflow, as that would be waste. It may contain cabbage stumps and other things difficult to work, which may be thrown back upon the heap as they rot.

The lower pit may be used as a store of liquid manure, for watering your corn in May or June; which gives it a start, and much strengthens its growth. In leaky ground, the bottom of the pits should be *staunched* with clay, and stones or gravel stamped in to harden it.

The privy should diseharge into the large pit, if possible, or else into the small one; and coal ashes (but not wood ashes) are good to throw where this comes out. Saw dust, or turf dust from the stacks, do very well. House washings, as soap-suds, &c. should also be thrown on the heap; but the wash of the country and heavy floods of rain should not be allowed to enter it, but be led into the meadows by other channels.

In wet seasons the top should be slanted to turn off the rain.

Each layer of dung being covered with a layer of peat or other dead vegetable matter, the whole heap, when finished, should be crusted over with way soil or other earth, to retain the vapors.

The fermentation will be slower or quicker, as it is more or less covered and compressed.

Wherever your heaps are made, whether in the yard or the field, give them a bed of some sort to absorb the drainage, and crust them over with soil, and mix up with the dung before spreading. The drainage carries down the strength of the heap; sometimes enough to kill the seed in the place where the heap stood; whilst it would have been of the greatest benefit if spread out with the dung.—*Ply. Herald.*

Cultivation of Wheat.—We find in the Farmers' Magazine, that the Chelmsford Club decide, from experience, that salt and lime applied to the seed of wheat, (probably in the same manner as we do here in the U. States,) are destructive to the slug and wire-worm; and that lime is beneficial to the crop, both before and after sowing it; that a good clover ley is best calculated to produce a good crop of wheat, and a bean or pea etch is the next best preparation.

LIMING.—RUST.

Sandy Spring, Maryland.

Notwithstanding "it is discouraging to preach to a deaf congregation," yet, whenever it appears from its effect, there is any improvement in the morals or practices of the congregation, it ought by all means to be persevered in; and even if the improvement is but slight, it does not lessen the obligation on those who may have a knowledge of facts which may be of use to others, to communicate them. In accordance with these views, I have been induced to throw in my mite, by way of furnishing a few facts with regard to the use and effects of lime in this neighborhood, to which I find some reference made in a letter from the present editor to William M. Peyton, of Roanoke, published in the January number, new series, Farmers' Register.

From twelve to fifteen years since, one of our farmers, living on some of the most unproductive land in our county, situated about six miles from the limestone quarries, was induced to try the effects of lime in larger quantities than he had applied it some thirty years before. He had then become discouraged, by seeing no effect from it, owing, as he afterwards found, to the small quantity used, say about twenty-five bushels to the acre. He soon found the beneficial effect very great, and he wanted no other stimulant than the increase of crops, to induce him to persist in its application. From the example of the individual above alluded to, I think is mainly attributable the great improvement in the land and crops in this neighborhood from the use of lime.

There are now within five miles of our point more than twenty lime kilns, and all have been erected within the time above mentioned, mostly all of which belong to farmers, who haul the stone from one to seven miles, and burn it at home, with their own wood; deeming it a cheaper and better plan than to purchase the lime.—The greater part of them have purchased quarries, for some of which as high as $800 and $1000 per acre has been paid. I have one containing rather less than one quarter of an acre, for which, I have no doubt, I could to-morrow, notwithstanding the hard times, obtain $300, which would be at the rate of more than $1200 per acre. And this from men who have worked for their money, and not disposed to expend it on a "bubble."

Now as to the effects of lime. I think it may be safely asserted, that upon an average, throughout the neighborhood, the application of fifty bushels to the acre, after the expiration of from one to three years, has trebled the crops; in some instances much more, and in a few possibly less. Various quantities have been applied, from 50 to 100 bushels, but not more than the latter quantity, to much extent, that I am aware of. My own opinion is in favor of the largest quantity, particularly of the kind of lime that we have access to, which has a good deal of sand in it, and I would put on two, or even three hundred bushels to the acre, without any fear of injury, either to the present or future crops. I have seen clover growing luxuriantly out of a bed of lime, (where a lump had slaeked after spreading,) of 500 or 1000 bushels to the acre.

I will now state a few results from my own application of lime.

About ten years since, I had some lime put, by way of experiment, on some very poor land, at the rate of not more than 50 bushels to the acre. I had recently purchased it, and that the land was poor, may be inferred from the price I paid for it; say $2 05 per acre. It had been always rented out. It had been cultivated under the *two shift* system that prevails here to a great extent; that is, corn alternate with oats. In the spring of 1841 I took possession. This piece was sowed with oats and clover, and at harvest, there was at least three bushels of oats on the limed ground, to one on that adjoining, and a much greater difference in the clover. By the fall of 1842, there was scarcely a sprig of clover on the ground not limed, and on that limed it is now well set.

Another piece of ground I ploughed in the spring of 1841, containing rather less than one and a half acres, two thirds of which had been cultivated under the two shift system, the greater part of the time for the last half century: the balance had grown up with sassafras bushes and sedge grass, and had probably become so poor some twenty or twenty five years ago, that it was given up. After ploughing the whole about six inches deep, I spread 100 bushels of lime to the acre, together with the manure from the straw of about 70 bushels of oats, and a few bushels of slacked ashes which the tenant had left. It was then well harrowed and planted in potatoes. The product about 100 bushels. I then seeded it with wheat, with a slight dressing of manure, obtained principally from penning five head of cattle at night through the summer, and at harvest cut nearly 19 bushels of wheat to the acre. It was somewhat affected with rust, but not so as to injure the grain, for that was as fine and plump as I almost ever saw. Whether the lime had the effect to prevent its being more injured by rust, I cannot say, but of this I am confident, that some of my neighbors, whose land previous to liming was as good or better than mine, did not raise more than half the quantity, and that inferior in quality, being much injured by rust.

The theory of lime affording nutriment to the grain of wheat more particularly than to the straw, is strongly supported by facts, and as it regards clover, I have recently been informed by the owner of a mill for getting out the seed, that the clover seed was more perfect raised on limed ground, and was worth from $1 to $1 50 more per bushel, than that grown on some of the best land in the country without lime.

But if I were to state one-fourth of the successful results from the use of lime in this part of the country, the limits of a Register would hardly suffice, and I will therefore conclude this with a remark made some years since, by Dr. Black of Delaware, and in which I fully concur, viz: "Although at first view it seems paradoxical, that lime makes a stiff soil light, and a light soil stiff, comparatively speaking this is certainly so. It makes all soils rich, and this merges all distinctions."—*Farmers' Register.*

Cutting Asparagus.—I stumbled accidentally, and from carelessness, several years since upon the plan of cutting Asparagus, which I have since recommended very highly; which is not to cut it below the ground, as usual, but to allow it to grow from fifteen inches to two or three feet long, and cut off about one foot of the top. By doing so, almost the whole will be equally tender and well flavored; while in the old way, only an inch or two is eatable. It is a fact, that Asparagus does not become tender until it turns green. I always thought it a poor vegetable, until I cultivated it, and gathered it as above; and now I find it one of the best. I think also, that there is a great deal more fuss, (pardon the word, as unclassical, but very expressive,) made about the cultivation of Asparagus, than there is any need for. I would say, make beds three feet apart, as if for cotton, lay your roots about eighteen inches apart in the alley, haul the bed back upon them, cover them well with fresh stable or other strong manure, immediately and every year; and if they are planted early in the winter, you may cut them twelve or fourteen months after. They may not possibly be as large as candles, but none the less palatable for that, nor bear any the worse for it—at least I have not found it so. If you live on a sea-island, and can make a bed in salt land, you will find it thrive to your satisfaction; and if you live in the interior, empty all refuse-salt and salt substances upon your bed as its specific manure.—*Southern Agriculturalist.*

There are cases, in which a little common sense is of more worth than a great deal of calculation.

GAMA GRASS.

To the Editor of the American Farmer:

DEAR SIR—I have a half pint of Gama Grass seed, sent me by a friend, and small as is the quantity, I estimate it as well worth sowing and taking good care of. I saw some few years ago in some newspaper, I think, some account of an acre of this grass seed in Alabama, which yielded near three tons of hay at a single mowing, and was mown six or seven times a year, (in that climate)—I have searched your American Farmer for years back, including those published many years ago, and the Albany Cultivator for three or four years back, and can find nothing about Gama Grass—and have to request you, or through you, some of your many correspondents, some information about it, such as, in what kind of soil (wet or dry) should it be sown? at what period? how much seed to an acre? the best mode of making good hay of it? where the seed can be procured? and other information that may be useful to one desirous to raise it and make it beneficial—how to save the seed, and when? how much hay should it yield per acre? how often cut? the cost of the seed?—And the same information and description is desired of Lucerne.

Your compliance through your very valuable "Farmer," will oblige your subscriber and obedient servant, WM. COOK.

Describe the seed, their size, shape, color,&c.

REPLY TO THE ABOVE.

The American Farmer is full of information upon the subject of the cultivation and produce of Gama Grass—but as our correspondent may, possibly, not have convenient access to the volumes containing it, we will briefly sketch such parts as may be necessary to subserve his purpose, after first answering the questions submitted to us.

Question 1.—In what kind of soil (wet or dry) should it be sown?

Answer—It will grow in any soil, and we have seen a very luxuriant crop in a piece of wet meadow land, where it had been placed from necessity; though its growth was very evidently improved by a thorough draining, to which the land was subsequently subjected. The better the soil, the more luxuriant will the grass grow. If we were to select a soil for it, we should choose the richest and deepest loam on our place; for, from the great depth to which the roots penetrate, the rapid growth of the plant, and the frequency of its admitting of being cut, it stands to reason that it should have all the advantages of depth and richness of soil, and be unstintingly aided by copious supplies of manure. In the preparation of the soil, care must be taken to provide against weeds; and if it be not naturally calcareous, or have been limed, lime should be supplied, as like all other grasses and grains, it delights in that soil best where lime abounds.

Ques. 2.—When should it be planted?

Ans.—As soon in the spring as the land can be got in good tilth. Connected with this part of the subject, we would remark, that after manuring the soil freely, it should be ploughed as deep as a strong team can well go; that the ground must then be harrowed until a fine tilth is produced, when it must be rolled.

Ques. 3.—How much seed per acre?

Ans.—We have never seen the quantity of seed allotted to an acre named; but, from an acquaintance with the size of the seed, should presume that half a bushel would be enough. The customary manner and distance of planting, is in rows, 18 inches apart, the plants 12 inches asunder, so that it would take 29,046 seed to plant an acre; but as many of the seed do not come up, we think it best to plant the seed much closer in the row, say, four inches only apart.

Ques. 4.—What is the best method of making hay of it?

Ans.—Upon this head there is no difficulty whatever, as it is as easily cured as any other grass, and requires no more drying than timothy, orchard grass, or red top. In stacking it away, a peck of salt to the ton of hay, would greatly promote its acceptability to the stock.

Ques. 5.—Where can the seed be procured?

Ans.—We procure it frequently in Charleston, S. C., where it doubtless can be now procured; but if our correspondent has half a pint of the seed, and it *be good*, we would advise him to make a beginning with that, as should they vegetate generally, they will afford him a good crop of seed next year, besides numerous plants for transplanting, as every bunch will bear subdividing, so as to allow him from 20 to 50 roots the succeeding spring, which, with the seed, will enable him to set out more than an acre the second year after commencing.

Ques. 6.—How often can you cut the hay?

Ans.—In Alabama, North and South Carolina and Mississippi, it has been cut as often as seven times in a season, and we should think, that in Bedford county, Va., from four to five cuttings in a season might be calculated upon, of from 15 to 18 inches in height. But to ensure this number, every cutting should be followed by a top dressing of some good rich compost manure, as moul l or rotten barn yard manure, and ashes, say ten bushels of either of the two first, to two of the latter, to be worked in between the rows with the hoe.

Ques. 7.—How much hay will it yield to the acre?

Ans.—This is a question we are not prepared to answer, as our experience is at fault upon this point; but here our good and respected friend, Dr. Magoffin, of Alabama, is a resource to which we can recur with a surety of obtaining the truth. He says, that "at each cutting a number of the *smallest* branches were weighed, and also of the *largest*. None found less than 5 lbs. and many 15 lbs., and some 16 and 17 lbs. per plant at *each* cutting—and *seven* cuttings in the season." He says, also, that he has dried it into hay at a loss of a little more than one-half in weight—viz: that 14 lbs of grass gave 6 lbs. dried hay. Now then, if we take the last yield of a bunch or root, that is 5 lbs., for our guide, five such cuttings would give us 25 lbs. the season per root, of grass; at the rate of loss named by Dr. Magoffin, it would give an aggregate of 10 lbs. of hay at five cuttings, during the season, for each bunch, so that as there would be 29,040 bunches on an acre, the acre, at that rate would yield 290,400 lbs. of hay; but suppose we take the fourth of that quantity as the probable product, and we have 36¼ tons as the yield of the acre—and if we carry the reduction still further, and take the fourth of 36¼ we will still have above nine tons to the acre—if, however, we take Mr. Magoffin's minimum of 5 lbs. to the bunch, we get the incredible quantity of 145 1-5 tons. That it is the most productive grass in cultivation, when properly cared for, we have no question; that it is eminently calculated for a warm climate we are equally certain, and believe also, that it will be well relished by all kinds of stock, if cut before it becomes too rank. When intended for hay, it should be cut at least once a month, the first cutting to take place when the grass may be 15 inches high. But as our correspondent and every other intelligent reader will admit, to get the most out of this grass, it must be grown under the most favorable circumstances of situation, soil, preparation of soil, cleanliness of culture and heavy manuring. The soil in which it may be grown, should have lime in it, be heavily manured before ploughing, be moderately top-dressed after every cutting; the weeds must be kept down by hand hoeweeding, and the ground be kept open to the influence of the elements.

The seed in the outside covering are somewhat the shape of castor oil beans, though much smaller, of a dusky yellow cover.

In preparing them for planting, they should have four times their quantity of hot water poured over them, and be permitted to remain therein for forty-eight hours, when they may be planted in a bed in rows 18 inches apart, the seed to be drilled at 12 inches asunder. When they first come up, they look like corn. They must be kept clean of weeds and other intruders by hoeing and hand-weeding the first season.

It may be said to be a matter of great labor to set a meadow with Gama grass, and so it is; but when one reflects, that when once set, it will last for 70 years, and that one acre will give as much hay as *ten* set in any other grass, the *trouble*, *labor* and *cost* should not be permitted to preponderate against the manifold advantages which belong to its culture.

Now what would be the labor attending the setting of an acre, the plants being grown? Not much more than planting an acre in corn. With two boys, ten years old, with the plants in baskets, to drop them in the furrows, 12 inches apart, and two men to cover with the hoe and press the earth with its back, we would agree to plant out an acre in a day, and when this would be done, we would indulge in the comfortable reflection, that we had perfected a work which would last for three-score years and ten; that both ourself and our children were secured in hay for our stock during our lives. Notwithstanding the immense yield of this grass—notwithstanding its long continuance—notwithstanding it is nutritive to and relished by stock of all kinds, such is the aversion of the great body of agriculturists to incurring any *extra* labor, that we fear it never will be successfully introduced. Again, we have heard the objection raised against it that it required to be cut too often; or, in other words, that it was too productive; for the objection resolves itself into this, let it be twisted as it may.

So far as our personal knowledge of this grass extends, we think that it delights in a warm climate, and that probably it could not be cultivated to advantage in the Northern and Eastern States. To the Southern States we look upon it as a God-send, as it would, if its culture were generally attended to, enable their planters to amply supply themselves, not only with grass for soiling their stock through the summer, but with abundance of good provender for winter.—*American Farmer.*

VALUE OF THE AGRICULTURAL PRODUCTS OF THE UNITED STATES IN 1842.—The American Farmer publishes the following estimate of the value of agricultural products of the U. States, which it says is based upon the "tabular estimate of the crops of 1842," made by the Commissioner of Patents in his Annual Report communicated to Congress. The prices set down are those which prevail in this market, or such as are supposed to be a fair average at other places. The actual prices here are designated by the letter *a*, those supposed by the letter *s*.

Articles of Produce.	Quantities of Produce.			Money value.	
Wheat,	102,371,340	bush.	at 75c	*a*	$76,738,005
Barley,	3,871,622	do	at 50c.	*a*	1,935,811
Oats,	150,833,617	do	at 22c.	*a*	33,194,325
Rye,	22,762,952	do	at 50c.	*s*	11,381,476
B'ckwheat	9,483,409	do	at 40c.	*s*	3,793,363
Ind'n Corn	441,829,246	do	at 42c.	*a*	185,568,283
Potatoes,	135,883,381	do	at 25c.	*a*	33,790,845
Hay,	14,053,335	tons	at $10	*s*	140,533,550
Flax and Hemp	158,569¾	do	at $120	*s*	19,028,370
Tobacco,	194,694,891	lbs.	at 6¼c,	*s*	12,169,330
Cotton,	684,333,231	do	at 8c.	*s*	54,666,658
Rice,	94,007,484	do	at 2¼c.	*s*	2,350,187
Silk Coons,	244,124	do	at 50c.	*a*	122,062
Sugar,	153,345,199	do	at 5c.	*a*	7,122,259
Wine,	130,748	gals	at 50c.	*s*	65,374
Supposed value of the above fifteen articles,					$582,639,968

Above is the value of the estimated products of fifteen articles only, the growth of 1842, amounting to six hundred millions of dollars; and yet, as a people, we are oppressed to the earth with pecuniary debts and difficulties, and almost without credit at home or abroad. Such a state of things is unparalleled in the history of the world, and it is useless to blink the question longer, as there can be no doubt but that

through the course of ruinous measures, tending to the derangement of the currency and the prostration of individual and public confidence, the interests of the farming and planting classes have been paralyzed.—*Balt. American.*

EXTRACTS FROM THE REPORT OF THE COMMISSIONER OF PATENTS

It may be well here, also, to allude to certain products not mentioned in the tabular estimate, which have been sometimes proposed as offering some encouragement to the agriculturist to engage in raising them, and thus add to the means of employing the labor which must be given to agriculture, and which, yet owing to the vast surplus of the grains, &c., above the home consumption, seems to promise but little profit.

One of these is broomcorn, which is much cultivated, and with success, in some towns on the Connecticut river, in Massachusetts.

We here annex an article from the appendix, which embraces much information on this subject, important in the South:

Broomcorn.—The North river kind is ordinarily the best crop; it is ten days earlier than the large kind, and yields about 750 pounds of the brush per acre—the brush meaning the dried panicles, cleaned of the seed, with eight to twelve inches of the stalk. The New Jersey, or large kind, yields a thousand or eleven hundred pounds of brush per acre. The stalks and seed are large. In good seasons this is the most profitable crop. Soil rich, alluvial lands are best adapted for the broomcorn, more especially if warmly situated, protected by hills, and well manured.

Method of planting.—The broomcorn is planted in rows, about two and a half or three feet apart, so that a horse may pass between them with a plough, or cultivator, or harrow. The hills in each row are from eighteen inches to two feet apart, or further, according to the quality of the soil. The quantity of seed to be planted is estimated very differently by different farmers—some say that half a peck is enough per acre, while others plant half a bushel, and some a bushel, in order to make it sure that the land shall be well stocked. The rule with some is to cast a teaspoonful, or thirty or forty seeds in a hill; the manure at the time of planting should be put into the hill, and old manure or compost is preferred, as being most free from worms.

Cultivation.—The broomcorn should be plowed and hoed three times; the last time when about three feet high, though some hoe it when it is six feet high, and when they are concealed by it as they are toiling in the field. The number of stalks in a hill should be from seven to ten. If there are only five or six stalks, they will be larger and coarser; if there are about eight, the bush will be finer and more valuable. In the first hoeing, the supernumerary stalks should be pulled up.

Harvesting.—As the frost kills the seed, the broomcorn is harvested at the commencement of the first frost. The long stalks are bent down at two or two and a half feet from the ground; and by laying those of two rows across each other obliquely, a kind of table is made by every two rows with a passage between each table, for the convenience of harvesting. After drying for a few days, the brush is cut, leaving of the stalk from six to twelve inches. The longer it is cut, of course the more it will weigh; and, if the purchaser does not object, the benefit will accrue to the farmer. However, the dry stalk weighs but little; if its weight is excessive, the purchaser sometimes requires a deduction from the weight. As it is cut it is spread on the tables still further to dry. As it is carried into the barn, some bind it in sheaves; and this is a great convenience for the further operation of extracting the seed. Others throw the brush into the cart or wagon, unbound.

Scraping.—The process of extracting the seed is called "scraping the brush." Two iron horizontal scrapers are prepared—one moveable, to be elevated a little, so that a handful of brush may be introduced between them. The upper scraper is then pressed down with one hand, and the brush drawn through with the other, the seed being scraped off. This is the old method. A newly invented scraper is superseding the old one. It is an upright instrument, of elastic wood or steel, inserted in a bench of a convenient height for the operator.

A quantity of brush is taken in the hand and brought down upon the top of this instrument. As it is forced down, and drawn towards the body, it separates the elastic sticks from the central piece, but their elasticity presses sufficiently on the brush so that the seed is scraped off.

The advantage of this scraper is, that both hands may be applied to the brush instead of only one hand, as in the other kind, and the elastic power of nature is substituted for the pressure of one of the hands. The instrument also seems to double the scraping surface. This instrument was invented at Hartford. I have been told it has not been patented.

Product.—A common crop is 700 to 800 lbs. per acre. There have been raised 1000 and 1100 lbs. per acre, with 80 or 100 bushels of seed. The large kind grows 11 feet high.

Value of the crop.—About the year 1836 or 1837, the brush sold for twelve and a half cents a pound; and one farmer in Northampton sold his crop standing, unharvested, at $100 per acre. Since then the price has been decreasing. This year it has been four and five cents. At six cents, the farmer, for 800 pounds, gets $48 an acre, besides 60 or 70 bushels of seed, worth a third of a dollar a bushel—so that he receives $70 or upwards from an acre.

Good farmers regard the seed alone as equal to a crop of oats from the same land. Some land owners have rented their land for broomcorn at $25 per acre, they putting on five or six loads of manure.

One farmer who, a few years ago cultivated 50 acres in broomcorn, must have had an almost unprecedented income for a New England farmer.

Quantity.—In Northampton, probably 200 acres are raised; in Hatfield, 300; in Hadley, 400; in other towns, Whateley, Deerfield, Greenfield, Easthampton, South Hadley, Springfield, and Longmeadow, perhaps 300 or 400 acres more; in all, in the valley of the Connecticut, 1200 or 13 acres; the product, in brush and seed, worth about $100,000.

Manufacture of brooms.—Individuals tie up brooms with wire or twine. The expense is greater for materials and labor when wire is used.

The turned broomhandles cost, as delivered, only $1 a hundred—one cent each. The expense of other materials and labor in making a broom, is six cents, or the whole about seven cents. In a good broom, a pound and a half of brush is employed, which, at the present price of five cents, would be seven and a half cents, so that a broom made with wire costs now about fourteen and a half cents. A manufacturer recently went to Boston, and could get an offer of only twelve cents, or twelve dollars per hundred for his brooms; at which rate he could not afford to sell them, and chose to retain them.—Brooms are made with brush weighing three-quarters of a pound, one pound, one pound and a quarter, and one pound and a half. The brush is whitened by the manufacturer. It is placed in a large tight box, and bleached by the fumes of sulphur; but this process is said to weaken the brush. Who would think of whitening broom brush for beauty? Thus it is that fashion descends into the vale of life, and to the humblest of concerns. Why should not the house maid wield a beautiful broom, with white brush and variously interlaced wire, and polished and variously colored handle?

Miscellaneous.—A few remarks will be added, some of which were omitted in their proper places. If the stalks are cut before the seed is ripe they are better, stronger, more durable, than if cut after the seed is ripe. In this case, the farmer would lose the value of the seed. He of course would not submit to this loss, unless it is made up to him by the increased price of the brush.

The seed is used for feeding horses, cattle and swine. It is ground and mixed with Indian meal, and is regarded as excellent food; it weighs 40 lbs. a bushels.

Mr. Shipman, of Hadley, is the greatest manufacturer of brooms in the valley of the Connecticut. If he employs, on an average ten hands, and each hand makes 25 brooms per day, the number made in a year would be 78,000. It is said he has made 100,000.

The brush, when it is put in the barn, should be placed on a scaffold, so as to be exposed to a circulation of the air, that it may dry, and not mould. For all the purposes of use, a broom made with twine is equal to one made with wire; and a man can make several more of them in a day.

Mr. Shipman uses 300 to 400 pounds of large twine, at 20 to 30 cents a pound, and 2000 lbs. of small twine, at 31 cents. Perhaps he manufactures only an eighth part of the brooms manufactured in Hadley.

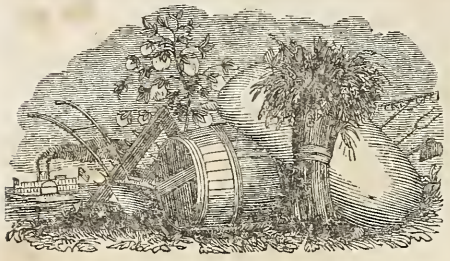
At the price of 20 cents, the price of brooms a few years ago, the broom manufacture of Hadley would thus amount to $160,000.

It is probable that the extended cultivation of the broomcorn will reduce the profits of this product to the average profits of good farming.

The Tomato.—The celebrity of this plan has become astonishing. A few years since prejudice reviled at its excellence with its most vindictive tauntings. Now, it is an article of so general popularity, scarcely a garded, or an apology for one is to be found where it is not cultivated, and almost every voice is loud in proclaiming its excellencies. The tomato has three kinds of varieties, to wit: the large common, the egg, and the golden drop. We prefer the two last kinds for culture as they are firmer, or more solid in their texture and more delicate in their flavor. The tomato may be started in a hot bed, or in boxes in the house in March. Then by care, large thrifty plants will be ready for putting out as soon as the season of frost is passed. They do not require a rich soil; this causes them to run too much to vine, but rather an excitement to push forward to perfection.—We know of no more sure effective to produce this than to put say half or a third of a common shovel full of hen or pigeon's dung in the hill. It is admirably calculated for pepper or for tomatoes.

After the early frost had killed the vines last fall, a friend of ours, of close observation and exact calculation, experimented by feeding the tomatoes that remained to her cows. They were readily eaten, and the quantity of milk was increased. This certainly adds another to the thousand and one uses to which they have been applied.—*Farmer's Cabinet.*

Necessity of a Change of Crops.—In a conversation the other day with an intelligent friend, I stated the remarkable fact, that if an animal were to be confined to one particular diet for a certain number of days, sickness, and eventually death must be the consequence; when he immediately applied the *rationale* of the fact to a subject at once so highly interesting and natural, that I cannot help recording it.—"Then," said he, "this shows at once the necessity of a change of food to the crop; or which is the same thing, a change of crop to the soil—a *rotation of crops*, as it is called." Now in this little remark, a volume is thrown open to our perusal, and by studying it, I believe we may derive information and advantages at present unknown and unappreciated; and in return for the many useful hints and very pleasant ideas that I am continually reaping and garnering up from the perusal of your paper, I offer the above in grateful acknowledgement.—*Farm. Cabinet*



WEDNESDAY, APRIL 26, 1843.

BACK NUMBERS.—All new subscribers to the "Southern Cultivator" can be supplied with the back numbers.

THE PLANTER

Is the title of a new paper, the first number of which has just been issued by Messrs DUBOSE & JOHNSTON, at Columbia, S. C. It is a very neat folio, and to render it more interesting to every class of readers, it combines within its range, agriculture, miscellany and news. Subscription $2 50 per annum.

MR. FOOTE'S ESSAY.

In the present number we commence the publication of a Prize Essay on Manures, delivered by Mr. FOOTE, before the Berkshire County (Mass.) Agricultural Society, which we shall complete as rapidly as our limits will permit.—Mr. F. has devoted much time and labor to the investigation of this important branch of husbandry, and his essay, which cannot fail to be read with interest by every farmer who properly appreciates the value of manure, discovers considerable research, and is therefore entitled to the dispassionate consideration of every planter who desires to improve his land and thereby increase its productions. If the careful perusal of this document, which is the result of much investigation, research, and the actual experiments of the author, shall only excite a spirit of investigation and induce to a course of experiments, it will certainly accomplish much good for the improvement of Southern agriculture. For wherever a systematic course of experiment be adopted and persevered in, truths of greater or less value will certainly be developed, which must result in a proportionate ratio of benefit. Men must not expect the highest state of improvement, even by the most skilful, in a day or even a year; but they must enter upon a patient system of investigation, determined to prosecute it with all their energies, through a series of years. This, and this alone, can elevate the science of agriculture in the South, to that point it has attained in all sections of the world where a proper direction has been given to labor, aided by the lights of science. Such a course has attained the highest state of perfection in many parts of the old world, and there is no good reason why the same result cannot be attained among the planters of the South.—We have as much energy, enterprise and intelligence among the mass as is to be found elsewhere, and all we want is to bring to the labor patience and perseverance, and with the aid of the lights which those afford who are far in advance of us in the science of agriculture, success will certainly crown our efforts. Indeed, with the lights before us, there is a much stronger incentive to action, than could have existed with the pioneers in this great labor of experiment, research and investigation; for while theirs was literally an untrodden path in the vast region of speculative theories, ours is a beaten way, illumined by the lights of their experience, and holding out a promise of reward as certain as we employ the means to obtain it.

MULES.

We are indebted to "A PLANTER" for calling our attention to the list of premiums to be awarded by "*the Planters' Club of Hancock*," at their annual meeting, which we had placed on file for publication immediately after it appeared in the Milledgeville papers, as we did not receive it through any other medium. It will be found in this number of the "*Cultivator*."

We concur fully with "A Planter" as to the superiority of the mule over the common horse for agricultural purposes, and we doubt not that the omission to include them in the list of premiums, was the result of inadvertence rather than design on the part of the Club. In giving this expression of decided preference for the mule over the horse, we desire to be understood as refering exclusively to the better bred class of mules; for we have long thought that most of our planters who raise mules, are not only too indifferent as to the stock of the mares from which they produce mule colts, but many seem to have arrived at the conclusion, that after the colt is foaled it requires no farther care or attention until in its two year old form, when they are frequently required to perform the duties of a full grown horse or mule. In our opinion this is a most erroneous practice, and one of decidedly bad economy. To produce fine mules, too much attention cannot be bestowod in selecting the mares, which should be of the best stock that can be obtained—combining good blood, size and fine symmetry. Nor is this all: when the colt is weaned, it should not be left, as in too many cases it is, to seek its sustenance through the winter months almost entirely in pastures in which not a blade of nutritious food is to be gleaned. On the contrary, care should be taken to supply it with a sufficiency of nutritious provender to sustain and support it in a healthy, thriving condition, and when it has attained the usual age at which they are required to be broke to work, instead of the generation of half grown, rough looking dwarf mules which meets our observation on almost every farm and in every wagon, we should see a class of stock approximating very nearly the horse in size, equalling him in symmetry, a glossy coat of hair and quickness of gait, and surpassing him in powers of endurance, while they would require a smaller portion of food to sustain them and render them capable of discharging the same and even greater labor. Being an ardent admirer of that noblest of all animals, the horse, we have, for our opportunities of observation, been a somewhat close observer of the cross with the ass, and we have never, in a single instance, seen a well bred, highly formed mare, fail to produce a mule colt infinitely superior in gait, appearance, symmetry and disposition, to the common coarse mares from which they are generally produced. It is based upon the soundest principles of philosophy and common sense, and must impress itself with all the force its importance demands, upon the mind of every reflecting planter who attempts to raise mules for agricultural purposes.

For the Southern Cultivator.

JACKS, JINNYS AND MULES.

MR. EDITOR—I have been for sometime expecting to see the list of premiums offered by the annual fair of the Planters' Club of Hancock county, inserted in the columns of the "Cultivator," and have been disappointed; but in looking over the Georgia Journal to-day, I find the list of premiums which are to be awarded at Sparta, on Friday, the 3d day of November next. The list is long and I approve of it all, but it is to be regretted that the committee should have neglected or left out the Jack, Jinny and Mules; for among the planters of the South, and, I might say, of the United States, the economy and advantages of the mule over the horse are universally admitted. The Club has offered premiums and honors for the 1st, 2d, 3d, 4th and 5th best brood mares, fillies, colts, bulls, cows, hogs, pigs, &c. &c., until they get to stockings and gloves, and nothing said about the Jack, Jinny or Mules. Why make this distinction between the horse and mule? Offering the highest premium for the Stallion and say nothing of the Jack. The horse, costly and extravagant—the mule cheap and economical.

Taking all these things into consideration, would it not have been better to have offered the highest premium for the Jack or Mule, which, in every instance, is to the advantage of the planter. But lest some should say it is a notion of my own, allow me to recommend the report of a respectable committee of the Farmers' Society of Barnwell District, South Carolina.—They say that the annual expense of keeping a horse, is equal to his value. The same committee also states, that "a four year old horse will seldom sell for more than the expense of rearing him; that the superiority of the mule over the horse had long been appreciated by some of their most judicious planters; that two mules could be raised at less expense than one horse; that a mule is fit for service at an earlier period; if of sufficient size, will perform as much labor, and if attended to when first put to work, his gait and habits may be formed to suit the taste of the owner."

This report may be considered a most valuable document to the planters. I have owned mules and horses, and I can testify, in every instance, to the truth of their report; and, from repeated experiments, I have found that a largs size mule will not require by two thirds the food to keep him in good order that will be necessary for a large horse, performing the same extent of labor; and in no part of the country is the mule better adapted to all the purposes of husbandry for which the horse is used, than in our own State.

You will see that I am no hand with a pen—my ideas are in my head and I cannot well

shake them out at the end of my fingers. I have written this, hoping it might be the means of calling out others who are capable of writing; but I know planters are too apt to depend on others to attend to that which they should do themselves, and in this way much to their interest goes undone. I also hope it will have some influence with the Committee. The times are hard, and we should act for the interest of the community. A PLANTER.

Green county, Ga.

[We cheerfully insert the communication of our correspondent, and hope to hear from him often.—ED. SOUTH. CULT.]

For the Southern Cultivator.

GREEN COUNTY, GA., April 20, 1843.

Messrs. Jones—As the time has arrived that, in the old counties of Georgia, we must fall upon the plan of manuring and resuscitating our old (and I may say, much abused) lands, or meet a poor return for our still poorer mode of cultivating them. As the first step, I would say to farmers, commence the right way to make manure, and save what you make. As the stable lot is the proper place to form your dung heap, manure pit, or whatever you may please to call it, it should be on the north of your dwelling house, the better to avoid the deleterious effects of the gases arising from the decomposition of the various matter you may make available in forming manure. Your stables and cow-sheds should be on the highest elevation in your lot; your dung pit on the lowest side, and formed in the following manner:—Mark off in a straight line, (or an elliptic form will answer if the fence around your lot is in that form,) the size you intend for your pit. Strip off all the soil until you come to a solid foundation, say two feet deep at the lowest side, gradually less until you arrive at the surface or upper side of the pit, and form a bank with the soil you take off on the lowest side, close to your lot fence; then form side wings from this line, diverging in width from a right angle about thirty degrees, so as to embrace all the wash or moisture that may incline from your stables and cow-sheds, and endeavor to make this the receptacle of every thing that comes off your farm that can be converted into manure First, all noxious weeds about your garden and lots during the summer; next keep your stables well littered with leaves or straw, and, in the fall of the year, keep your lot well covered with corn and cotton stalks, and when tolerably well trodden, say every two or three weeks, select a rainy day and clean out your stables and cow-sheds, and rake up your lot, and with a wheelbarrow deposite all in the pit. Then litter your stables well with refuse straw, and strew your lot twelve inches deep with all and every thing that can be converted into manure. Follow up this process, and leave the side of the pit nearest your stables gently sloping, so that by laying a plank there you will be enabled to wheel up your manure after the pit has filled to a considerable height.

Your stable manure and moisture becoming amalgamated with the mass in the pit, which, by its well known heating and fermenting qualities, will soon decompose the mass into a solid, well rotted manure; and, by pursuing this method, on the March following you will have every thing that came of your farm the previous year, in a proper form to return to it again, and have the good reflection of carrying out the principles of natural justice towards Mother Earth, and you will meet your reward in her increased fertility.

The scientific may object to this process of forming a dung pit, as calculated to destroy or let the ammonia escape; but this can be obviated by mixing a layer of muck, rotten wood, coal dust or marl, or common soil will answer in a great degree. Thus, whenever you add any thing to your dung pit, cart in a few loads of either of the above absorbents, which will sufficiently fix and retain the ammonia.

The smallest farm may with care, in this manner, manure ten acres of land well; and if he will devote his spare time and wet days to composting in his woods, where nature has given him ample material in rotten logs and leaves, also the vegetable mould which has accumulated in the corners of his fences, he may manure and give a good dressing to ten acres more, and that with less labor than would be expended in clearing five acres of knobby land, (which is all that a goodly number of farmers have now to clear.)

If from these rambling views, any of your readers may glean a single hint, and improve the same, the aim of the writer is accomplished; and if you think you can present them to your readers in a form worthy of your valuable paper, I may be induced to trouble you again at some future day.

Yours, with respect.

WOODVILLE.

HINTS FOR HARD TIMES.—Rise early in the morning, be diligent during the day, in attending to our business, and not worry ourselves with our neighbor's concerns.

Give encouragement to home industry, and in all give the preference to American manufactures over foreign in every case, when they are equally good.

Instead of following the fashions of Europeans, let a spirit of independence be cultivated, and decide for ourselves how our coats, boots and hats shall be made.

Keep out of the streets, unless business calls us to transact that which we cannot do in our shops or dwellings.

By all means keep away from drinking and gambling houses.

When we buy an article of clothing, study commendable economy, at the same time get a good article, and wear it out regardless of any change of fashion—fashion is a great tyrant and men are fools to be slaves to it.

Stay home at nights, improve yourselves by reading, writing or instructive conversation, and retire to your beds at an early hour.

Be kind to your relations, obliging to your friends and charitable to all.—*Maine Cult.*

CURE FOR THE RED-WATER IN CATTLE.—Take a mixture of equal parts of oleum philosophorum, oleum aspte and oleum terebinthum, and put sixty to seventy drops in half a quart of lukewarm water for a middle-sized cow, and from thirty to fifty for a calf. If it does not cure in twelve hours, repeat the dose.

CHOKED CATTLE.—My mode of giving relief to choked cattle is, to let them have *a good pinch of snuff*. They will sneeze and throw up any that is too large to pass down. Will you try it?

AGRICULTURAL CHEMISTRY

CARBON—ITS PROPERTIES AND RELATIONS TO VEGETABLE LIFE.

Carbon is the name given by chemists to the substance of wood charcoal in its purest form. When wood is distilled in close vessels, or burned in heaps covered over, so as to prevent the free access of air, wood charcoal is left behind. When this process is well performed, the charcoal consists of carbon with a slight admixture only of earthy and saline matters, which remain behind on burning the charcoal in the air.

Heated in the air, charcoal burns with little air, and, with the exception of the ash which is left, entirely disappears. It is converted into a kind of air known among chemists by the name of carbonic acid, which ascends as it is formed and mingles with the atmosphere.

Charcoal is light and porous, and floats upon water, but plumbago or black lead and the diamond, which are only other forms of carbon, are heavy and dense. The former is 2¼ and the latter 3½ times heavier than water. The diamond is the purest form of carbon, and at a high temperature it burns in the air or in oxygen gas, and like charcoal, disappears in the state of carbonic acid gas.

Of this carbon, all vegetable substances contain a very large portion. It forms from 40 to 50 per cent, by weight, of all the parts of plants which are cultivated for the food of animals or of man, that is, of these plants in their dried state. In the economy of nature, therefore, it performs a most important part.

The light porous charcoals obtained from wood, (especially from the willow, the pine and the box,) and from animal substances, possess several interesting properties, which are of practical application in the art of culture. 1. They have the power of absorbing in large quantity into their pores, the gaseous substances and vapors which exist in the atmosphere;* and on this property, as I shall explain hereafter, the use of charcoal powder as a manure probably in some measure depends. 2. They also separate from water and decayed animal matters or coloring substances which it may hold in solution; hence its use in filterers for purifying and sweetening impure river or spring waters, or for clarifying syrups and oils. This action is so powerful that port wine is rendered perfectly colorless by filtering through a well prepared charcoal.

In or upon the soil charcoal for a time will act in the same manner, will absorb from the air moisture and gaseous substances, and from the rain and from flowing waters, organized matters of various kinds, any of which it will be in a condition to yield to the plants which grow around it, when they are such as are likely to contribute to their growth. 3. They have the property also of absorbing disagreeable odors in a very remarkable manner. Hence animal food keeps longer sweet when placed in contact with charcoal—hence also vegetable substances containing much water, such as potatoes, are completely preserved by the aid of a quantity of charcoal—and hence the refuse charcoal of the sugar refiners is found to deprive night soil of its disagreeable odor, and to convert it into a dry and portable manure. 4. They exhibit also the still more singular property of extracting from water a portion of the saline substances they may happen to hold in solution, and thus allowing it to escape in a less impure form. The decayed (half carbonized) roots of grass, which have been long subjected to irrigation, may act in one or all these ways on the more or less impure waters by which they are irrigated—and thus gradually arrest and collect the materials which are fitted to promote the growth of the coming crop.

*Thus of ammonia they absorb 95 times their own bulk, of sulphuretted hydrogen 55 times, of oxygen 9 times, of hydrogen nearly twice their own bulk, and of aqueous vapor so much as to increase their weight from 10 to 20 per cent.

That life is long which answers life's great ends.—*Young.*

PLANTERS' CLUB OF HANCOCK.

The Annual Fair of this Club will take place at Sparta, on Friday, 3d November, 1843, on which day all crops, stock, and articles that may be offered for premiums or honors, will be examined by the committees appointed for that purpose; and on the next day, Saturday, the committee will report, the public exhibition of stock and other articles will be made, and an address be delivered before the Club. Premiums awarded on the following articles:

For the best acre of Corn.....$5 00
" 2d best do.....3 00
" 3d, 4th and 5th do—Honors.

For the best acre of Wheat.....5 00
" 2d best do.....3 00
" 3d, 4th and 5th do—Honors.

For the best acre of Oats.....5 00
" 2d best do.....3 00
" 3d, 4th and 5th do.—Honors.

For the best acre of Sweet Potatoes.....5 00
" 2d best do.....3 00
" 3d, 4th and 5th do—Honors.

For the best acre of Turneps.....5 00
" 2d best do.....3 00
" 3d, 4th and 5th do—Honors.

For the best acre of Cotton.....5 00
" 2d best do.....3 00
" 3d, 4th and 5th do—Honors.

Competitors for premiums on crops will be required to give the *modus operandi* of culture.

For the best Stallion of four years and upwards.....5 00
" 2d best do.....3 00
" 3d, 4th and 5th do—Honors.

For the best 3 year old Colt or Filly.....3 00
" 2d best do.....2 00
" 3d, 4th and 5th do—Honors.

For the best 2 year old Colt or Filly.....2 00
" 2d best do.....1 00
" 3d, 4th and 5th do—Honors.

For the best sucking Colt or Filly.....2 00
" 2d best do.....1 00
" 3d, 4th and 5th do—Honors.

For the best brood Mare, with or without a Colt.....5 00
" 2d best do do.....2 00
" 3d, 4th and 5th do—Honors.

For the best Bull.....3 00
" 2d best do.....2 00
" 3d, 4th and 5th do—Honors.

For the best 2 year old Bull.....2 00
" 2d best do.....1 00
" 3d, 4th and 5th do—Honors.

For the best Milch Cow.....3 00
" 2d best do.....2 00
" 3d, 4th and 5th do—Honors.

For the best 2 year old Heifer.....2 00
" 2d best do.....1 00
" 3d, 4th and 5th do—Honors.

For the best Tup.....2 00
" 2d best do.....1 00
" 3d, 4th and 5th do—Honors.

For the best Ewe.....2 00
" 2d best do.....1 00
" 3d, 4th and 5th do—Honors.

For the best Boar.....3 00
" 2d best do.....2 00
" 3d, 4th and 5th do—Honors.

For the best Sow.....3 00
" 2d best do.....2 00
" 3d, 4th and 5th do—Honors.

For the heaviest fat Hog, from one to two years old, in proportion to age..2 00
" 2d best do.....1 00
" 3d, 4th and 5th do—Honors.

For the heaviest Pig, agreeably to age, from 6 to 12 months old.....2 00
" 2d best do.....1 00
" 3d, 4th and 5th do—Honors.

For the best piece, of 10 yards, Homespun, for gentleman's wear.....3 00
" 2d best do.....2 00
" 3d, 4th and 5th do—Honors.

For the best Counterpane,.....3 00
" 2d best do.....2 00
" 3d, 4th and 5th do—Honors.

For the best piece of 10 yards of Domestic Silk.....5 00
" 2d best do.....3 00
" 3d, 4th and 5th do—Honors.

For the best article of Negro Clothing....2 00
" 2d best do.....1 00
" 3d, 4th and 5th do—Honors.

For the best article of Negro Blanketing—Cotton or Wool.....2 00
" 2d best do.....1 00
" 3d, 4th and 5th do—Honors.

The Club will award liberal premiums and honors on all articles which may be manufactured by ladies and offered for exhibition—such as needle-worked capes, caps, work-pockets, stockings, gloves, &c.; in fact every article that may be sent by them.

TUTTLE H. AUDAS, Sec'y.

Sparta, Ga.

OVERTRADING.

We have seldom, says the Central New-York Farmer, read a more graphic description of the troubles of a man of business, than the one annexed. And yet although all this is true, and probably falls far short of the reality, often our farmers are preparing their sons to rush into the vortex of mercantile life, and will soon be called upon to witness in their history the same results, which when too late to remedy, they will most surely lament. We would urge them now to pause—and prepare their sons not for the hazards and trials of mercantile life—but for the labor, the joys and happiness of agricultural pursuits.

"OVERTRADING.—What a lesson the grasping, anxious overtrading man of business receives during a panic! His visions of wealth, the dream and hope of his life, the calculations of his brain for years, vanish—all die in a single day! The glossy bubble bursts and its contents fly into thin air. When will men learn wisdom, and be content to do business within their means? How much happier would a man's life pass, could he divest himself of that greedy craving after riches, and be satisfied with making money moderately, pay more attention to his health and comfort, the virtues of society, and enjoy the blessings within the reach of every one in this happy land!

"He who contracts his swelling sail,
Eludes the fury of the gale."

What a life of abject slavery do the generality of our merchants lead! Dependent on their credit, dependent on the banks, dependent on their customers, dependent on their friends, what happiness do they know? None. Up early—they scarcely take time to swallow their breakfasts, and hurry to their stores, where their minds are immediately engaged deep in business, and they are subject to the constant disappointment and harrassing results of an over extensive trade on small means. They have no time through the day to enjoy peacefully the dinner hours, but, with their brains full of calculations, hasten through it, and again to business, as if their very lives and souls depended on the making of money. When evening comes, tired and worn out, perplexed and weary, they seek their homes, not to partake of recreation, and the comforts of social intercourse with their families, but to a feverish, sleepless night's rest, and in the morning to a repetition of the scenes of aggrandisement and ambition which every succeeding day brings forth.

LIGHTWOOD FROM OLD FIELD PINES.—Mr. J. H. Fugua, in writing for the Southern Planter, makes a few remarks on old field pines, the correctness of which we hope some of our correspondents will put to the test of actual experiment and furnish us with the result.

He remarks, "I consider a grove of such pines exceedingly valuable for garden posts, or posts of any kind; if properly prepared, they will last as long as locust or any other timber. My mode of treatment is as follows: I take a drawing knife and draw off the bark as the tree stands, as high up as I want to use it: in this situation, the tree, which will not die, remains a twelvemonth, when, in consequence of the sun having drawn the rosin to the surface, it will become a solid bulk of lightwood, and will be ready for use."

Planter.

PLANTING LARGE POTATOES.—We have been of the opinion, that if large potatoes were planted instead of *slips*, a much finer crop would be made, and we requested a friend, who raised unusually large potatoes to try the experiment last year, of planting both kinds—the very large and the slips. The following is a letter received from him on the subject.—*Planter.*

DEAR SIR—I promised you the result of an experiment in planting the full grown and largest size sweet potato, instead of the smallest size, such as are usually planted. As you are aware, I alternately planted one row of large and one of very small potatoes. In harvesting I could not perceive any advantage whatever from the large over the small seed. This result was contrary to my expectation, particularly as there was a marked difference in the vine, during the early part of the summer, those from the largest seed appearing much more vigorous

AUGUSTA MARKET.

TUESDAY P. M., April 25.

Cotton—Since our report of last Tuesday, the market remained in a very inactive, quiet state, until after the receipt, on Sunday night, of the accounts from Liverpool to the 4th instant, by the Britannia, at Boston, which were deemed more favorable, and quite an active business engaged dealers on Monday, at an advance of ¼ to ⅜ of a cent, but to-day that feeling is subsiding, and the market seems to be quietly dropping back to its former position, though it has not yet reached that point.

Exchange is at par on all points. Central Bank, Alabama notes, and State 6 ℔ cent Bonds have undergone no change since our last report.

CONTENTS OF THIS NUMBER.

	PAGE.
Mr. Foote's Prize Essay	57
Mr. Bommer's Manure; Management of Manure	58
Friendly Advice to the Small Farmer; Cultivation of Wheat; Liming; Cutting Asparagus	59
Gama Grass; Value of Agricultural Products in the United States in 1842	60
Broomcorn; Tomato; Necessity of a change of Crops	61
The Planter; Mr. Foote's Essay; Mules; Jacks, Jinnys and Mules	62
Directions for forming a Dung Pit; Hints for Hard Times; Cure for the Red Water in Cattle; to relieve Choked Cattle; Carbon, its properties and relations to Vegetable Life	63
Premiums of Planter's Club of Hancock; Overtrading; Lightwood from Old Field Pines; Planting large Potatoes; Augusta Market	64

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SOUTHERN CULTIVATOR.

VOL. I. AUGUSTA, GA., MAY 3, 1843. No. 9.

MR. FOOTE'S PRIZE ESSAY.

[Continued from page 58.]

MANAGEMENT OF OUR STABLES.

From facts like the above, we should be quick to gather lessons of wisdom; not lessons of knowledge merely, (for they may be profitless,) but lessons of that practical wisdom, which not only comprehends and appreciates what is good, but employs the best means of its attainment.—Let our *stables* receive a just share of attention: let the ground beneath them be shaped as to conduct the urine which falls upon it, directly to the common reservoir in the yard; or let it be excavated in a proper form and supplied with suitable absorbents; or let the floors be made tight, so that the urine can be taken up by the litter, or conveyed by gutters to the yard, and there can be no question that at least one-third will be annually added to the value of our stock manures.

Where any of the improved machines for that purpose are in use, the expense of *cutting* the straw intended for litter will be more than repaid, by the greater ease with which the floors may be cleaned, especially in winter, by the greater amount of liquid it will absorb, and by the greater facility and evenness with which the manure may be spread in the spring. Dry powdered muck and loam, stored under cover for the purpose, may also be highly recommended for free use in the stables, as being well adapted to prevent the waste of the liquids there, and also to the escape of the juices and gases from the heaps as they are formed without. And last, not least, an occasional sprinkling of plaster over floors will not only preserve such salts as would otherwise be lost by exhalation, but at the same time greatly contribute to the sweetness of the stables.

MERITS OF THIS SYSTEM.

It is not imagined that the system now indicated for the preservation of our barn yard manures is a perfect one, securing all advantages desirable to be secured. It does not wholly protect the manures from the wasting action of the atmosphere, nor from liability to loss by infiltration and drainage. But, perhaps, considering the universality of its application, and the comparative ease and cheapness with which it may be adopted, it is the best that can be recommended for general practice. In situations where it is practicable, additional advantages may be unquestionably secured by the use of a *barn cellar*, into which any or all of the manures of the establishment may be thrown, with suitable absorbants, and the whole wrought together into the richest of all composts by the voluntary labors of the swine. No doubt farmers will find their account also in *housing* their manures as much as possible, since by being thus protected, their most valuable portions (their juices and salts) will be preserved to a much greater extent than it is possible for them to be in the open air.

COMPARATIVE VALUE OF MANURE.

The barnyard being the common receptacle of the excrements of the horse, the cow and the sheep, and the great object having been, thus far, to point out the best mode of saving the *whole* of them, the *comparative value* of these different substances has passed unnoticed. In order, however, that the farmer may direct his labors for the preservation of his manures to the greatest profit, he should certainly have the benefit of all known facts on this point.

"The quantity of vegetable and animal matter in horse dung is considerably larger than in cow dung. It is as 27 to 14, or nearly double; and of course the quantity of nitrogen which it is capable of yielding is nearly double that of cow dung. Sheep dung is similar to horse dung, but contains a greater quantity of vegetable matter in a soluble state. It is also richer in salts; and the quantity of nitrogen which it is capable of yielding is greater than in either of the preceding substances. Hog manure contains still larger quantities of soluble matter, and is capable of yielding a large quantity of nitrogen in the form of ammonia. It ranks next in value to night soil, which has ever been celebrated as the most valuable substances used for manure."—*Gray's Agriculture, p.* 286.

"Experiments undertaken by order of the Saxon and Prussian authorities, varied in every form, and continued for a long period, prove that if a soil without manure yield a crop of three for one sown, then the same land dressed with cow dung yields seven for one sown—with horse dung ten for one sown—with human manure fourteen for one sown."—*Dana, p.* 143.

THE PIGGERY.

Still greater care will here be requisite to 'see that the commonwealth receives no detriment,' inasmuch as the treasures at stake are of higher value, and from two circumstances more liable to waste, viz: there being a greater proportion of liquid excrements, and the solid portions being more exposed, from the fact of their being constantly upturned by the rooting of the swine, and thus presenting every hour in the day fresh surfaces to the action of the sun and winds.

The former of these circumstances will be judiciously met by supplying the pens with an abundance of straw, leaves, saw dust and the like; the latter by furnishing the yard with an occasional load of muck, and almost any quantity of weeds, pea and buckwheat straw, potato vines, &c.—all of which will be rapidly converted into the most efficient supports of vegetable life.

It is suggested whether it would not be an improvement on the present system, were the yard and pen but one enclosure, consisting of an open area under cover, (with floors for eating only,) where the same use might be made of muck and litter as at present, and the whole completely shielded from the atmosphere.

THE PRIVY VAULT.

This, in proportion to the volume of its contents, should command a greater share of our solicitude than any other of the depositories of the farm manures. Consider simply the *nature of the food* from which the substances under consideration result, we might well suppose them to possess a superior efficacy in promoting the growth of the finer plants and grains; a supposition which agricultural chemistry unites with all experience in fully justifying. So far, therefore, as the simple preservation of manure is concerned, it is doubtless from this quarter that the farmer can derive the greatest profit at the least expense.

Let the vault, then, (constructed with a due regard to convenience, as well as to the exclusion of air and moisture,) be carefully supplied at proper intervals, with powdered charcoal alone or with dry powdered muck and gypsum, (the best of all substances for this purpose, but for which cut-straw, surface soil, ashes and old lime may be substituted,) and the object will be fully accomplished. The liquid portions will be absorbed, and the volatile productions converted into fixed salts; the whole mass will become inodorous and inoffensive, (no small advantage to the family as well as to the farm,) and a goodly quantity of the richest of manures will be prepared for convenient application to the cultivated crops.

VALUE OF HUMAN EXCREMENTS.

Deeply impressed ourselves with the value of these excrements, and deeming it of no small importance that a general interest should be awakened in relation to them, we cannot forbear from presenting our farmers with one or two pertinent quotations.

"In respect to the quantity of nitrogen contained in excrements; 100 parts of the urine of a healthy man are equal to 1300 of the fresh dung of a horse, and to 600 parts of those of a cow. Hence it is evident that it would be of much importance to agriculture if none of the human urine were lost. The powerful effects of urine as a manure are well known in Flanders, but they are considered invaluable by the Chinese, who are the oldest agricultural people we know. Indeed, so much value is attached to the influence of human excrements, that laws of the state forbid that any of them should be thrown away, and reservoirs are placed in every house, in which they are collected with the greatest care. No other kind of manure is used in their cornfields. The agriculture of this country is the most perfect in the world."

"If we admit that the liquid and solid excrements of a man amount on an average to 1¼lbs. daily, (5-4 lbs. urine and ¼ lb. fæces,) and that both taken together yield 3 per cent nitrogen, then in one year they will amount to 547 lbs., which contain 16½ lbs. nitrogen, a quantity sufficient to yield the nitrogen of 800 lbs. of wheat, rye or oats, or of 900 lbs. of barly. This is much more than is necessary to add to an acre of land, in order to obtain, with the assistance of the nitrogen absorbed from the atmosphere, the richest possible crop every year. Every town and farm might thus supply itself with the manure, which besides containing the most nitrogen, contains also the most phosphates; and if an alternation of the crops were adopted, they would be most abundant. By using at the same time, bones and lixivated ashes of wood, the excrements of animals might be dispensed with.—*Liebig p.* 184.

"In Belgium, which has been the cradle of enlightened agriculture, and where good modes of cultivation are continued and constantly improved, they make astonishing use of this kind of manure. So great a value do the Flemings attach to it, that the cities set a high rate upon the privilege of disposing of the cleansing of their privies, and there are, in each one of them, sworn officers for the assistance of those who wish to make purchases."

"We shall find great difficulty in bringing this branch of industry to the same degree of perfection amongst us, that it has arrived at in Belgium, because *our farmers do not realize its importance;* and have a repugnance to employ-

ing this kind of manure. But could they collect carefully all these matters, mix them with lime, plaster or gravel, till the odor was dispelled, and then carry the whole upon the fields!"

"Already, in most of our great cities, the contents of the privies are used for forming poudrette; this pulverulent product is sought for by our agriculturists, who acknowledge its good effects, let us hope that, becoming more enlightened, they will employ the fecal matter itself, as being more rich in nutritive principles, and abounding equally in salts; they can easily govern and moderate the too powerful action of this, by fermentation, or what is still better, by mixing it with plaster, earth, and other absorbents, to correct the odor.—*Chaptal, p.* 62.

PURE ANIMAL MATTER.

All animal matter, such as the carcases of dead animals, unmerchantable fish, the refuse of the slaughter house, the relics of the kitchen and the waste of the tan yard, the shoe shop, the carding mill, the comb, glue, soap and woollen cloth manufactories, &c.—by being seasonably gathered up and either incorporated with the barn yard manures, combined with compost materials, or buried directly in the soil, will prove the most efficient aids in promoting fertility. "The carcass of a dead horse," says Lord Meadowbank, "which is suffered to pollute the air with its effluvia, has been happily employed in decomposing 20 tons of peat earth, and transforming it into the most valuable manure."

In illustration of the value of numerous refuse matters commonly accounted "good-for-nothing," and thrown away, it may here be stated that the finest crop of eight-rowed corn inspected by the Agricultural Committee of Berkshire, the present year, owed its superiority, in their opinion, to the employment of a compost manure, in which the principle ingredient was *woollen flocks*. The soil was thin, consisting of exceedingly coarse gravel; yet the growth was luxuriant and the ears well filled, perhaps beyond comparison for the present year."

PURE VEGETABLE MATTER.

This may include straw, leaves, vines, &c., and green and ripened crops ploughed under to improve the soil; but the consideration of this topic being unnecessary in the present connection, it will be reserved for a future paragraph, under the second branch of our general subject, viz:

THE APPLICATION OF MANURES.

In order to the judicious application of our manures, it is obviously necessary that we have regard to certain characters and conditions of soil; as the proportions of its inorganic constituents, the amount of its organic materials, and its relations to temperature and to moisture.

INORGANIC CONSTITUENTS OF SOIL.

By the inorganic constituents of soil are meant those purely *earthy* substances which form the *basis*, and chiefly determine the *texture* of all soils, but which of themselves, whether in a combined or separate state, are wholly incapable of vegetation. Such are gravel, sand and clay, (as also lime,) which constitutes the basis of the great majority of all our soils.

CONSTITUTIONAL CHARACTER OF SOIL.

When either gravel or sand predominates in the constitution of a soil, it is termed silicious, from silica, the common name of gravel and sand. When clay predominates, it is denominated argillaceous aluminous, from argil and aluminia, both of which signify clay in a pure state. If lime be a principle constituent, it is called calcareous, for calx, signifying chalk, which is only a certain modification of lime.

PHYSICAL CONDITIONS OF SOILS.

The different proportions in which the inorganic constituents enter into the composition of any soil, will also chiefly determine its physical condition; i. e. it will be light or heavy, (more properly, loose and compact,) wet or dry, warm or cold, in proportion as it consists chiefly of gravel and sand, or mostly of clay.

ORGANIC CONSTITUENTS OF SOIL.

By the organic constituents of soil are meant those vegetable and animal substances which help to compose the soil to a certain depth, which exert a considerable influence also upon its texture, and upon which vegetation is extirely dependent for its subsistence. In scientific works on agriculture, this portion of the soil is usually treated of under the name of *geine, humus or vegetable mould;* and embraces every thing in the soil capable of decomposition, and thus becoming the food of plants.

OBJECT OF THE APPLICATION OF MANURES.

To increase this organic portion of the soil, is the great object of the application of manures. It should not, however, for a moment be imagined that the simple augmentation of the proportion of organic matter will insure fertility, since very much depends upon the state as well as the quantity of this matter in the soil. It is upon these two circumstances taken in connection, that the farmer is wholly dependent for success in all his agricultural operations.

CERTAIN CONDITIONS OF THE SOIL PRE-REQUISITE.

In illustration of what is meant by the dependence of fertility on the state of the geine in the soil, it may be observed, that manure applied to either gravel or clay in a pure state, might as well be applied to the surface of an equatorial desert, a pool of water, or an island of ice; the former (gravel,) being destitute of that quality of compactness which is necessary to prevent the salts and juices of the manure from escaping at once into the earth, or air, and to retain a sufficient degree of moisture for the purposes of vegetable life; and the latter wanting that opposite quality of prosity which is requisite for the escape of that superabundance of moisture, which by its own presence, and the exclusion from the soil of the other atmospheric agents, would prove equally fatal to all the processes of vegetation.

The proposition, therefore, must approve itself to every intelligent farmer, that the fertility of the soil depends not only on the *quantity* of geine in the soil, but also on the *state* of that geine as affected by its relations to the inorganic constituents. Hence the importance to the agriculturalist of making himself acquainted with the nature of the soil in general, and of his own soil in particular, that he may husband to advantage his means of fertilization, and not expend his strength in labors that will in the end prove fruitless.

CONSTITUTION OF THE BEST ARABLE SOIL.

The proportions in which chemical analysis has ascertained the different constituents of the most productive soils to exist, are about as follows: silica) gravel or sand) 60 parts to 100, alumnia (clay) 16 parts, lime 3 parts, oxide of iron and manganese 7 parts, geine (organic matter capable of becoming the food of plants,) 9 parts, potash 3 parts, soda 1 part, magnesia 1 part.

Says Chaptal: "From the results of analysis we find, that in the best earths there is a large quantity of gravel, which renders the soil light and easily worked, facilitates the passing off of superabundant rains. In consulting analysis of less fertile soils, we find that their fertility diminishes in proportion as one or the other of the three principal earths, (silicia, alumnia and lime predominates; and that it becomes almost nothing in those which possess the properties of but one. The mixture of earth then is necessary to the formation of a productive soil; and their proportion can be varied only according to the nature of the climate, and the kind of plants to be cultivated. Silicious and calcareous earths may form a larger proportion of the soil in moist, than in dry countries, and alumina may, in its form, predominate in those lands which, from their declivity, suffer the water to flow off freely; but a mixture of the three earths can alone form a good soil, and too great a disparity in their proportions materially affects the character of it."—p. 26.

STARTING POINT OF IMPROVEMENT.

Here then, is evidently the starting point, from which the farmer that would run the race of improvement, must calculate his "latitude and departure." From this post of observation must he survey the sphere of his labors, carefully noting the several ingredients of his soils, and the different proportions of their several combinations, as well as their different conditions; and thus will he be qualified to enter intelligently on the execution of any scheme relating to their improvement. If a careful observer, he will early make the important discoveries.

1. That an excess of silicious or calcarious substances, by rendering the soil too porous, occasions the speedy disappearance of his manures, exposes his crops to suffer from droughts and frequently disappoints his hopes of a harvest, and frustrates all his efforts at successful cultivation.

2. That an excess of argillaceous matter, by rendering his soil too compact, obstructs the passage of the surface waters that rest upon it in spring, refuses admittance through its indurated surface to the fertilizing dews of summer, excludes the healthful influences of the sun and air from the roots of his plants at every period, receives with indifference whatever manures he puts upon it, and renders all his labors upon it, to a great extent, abortive.

3. That a certain admixture of the different earths composes a soil sufficiently light and warm, meeting without detriment the ever varying states of the atmosphere, affording a ready passage to the rains in wet weather, and to the dews in dry, appropriating largely to his crops the beneficial influence of the sun and air, making the most of every particle of manure received, and amply compensating him for all the labor he expends upon it.

SOILS TOO COMPACT OR POROUS IMPROVED BY ADMIXTION.

Having made the above discoveries, the resolute *improver* of the soil will come at once to the conclusion, that which the hand of nature has left unfinished it is for *his* to complete; and setting himself at work in imitation of the *pattern* she has furnished him, will, by a due adjustment of the different ingredients of his several soils, bring up, at length, the poorest of his lands quite to the standard of the best.

He will not, however, find it advisable, in most instances, to effect this adjustment directly, i. e. by carting soil from one field to another for the purpose of admixture; but, rather to cart it first to the cattle yard to be blended with a portion of solid and liquid manure, and thence convey it to the localities selected for improvement.

This practice has been followed to some extent, by the writer, and with the most distinguished success. Indeed, so marked have been the beneficial results of this system as to leave upon his mind the full impression, that for a light, silicious soil, two loads of argillaceous earth well mixed in the cattle yard with one of manure, are of more actual value than would be three equal loads of clear stable manure.—For a heavy, aluminous soil, a similar treatment with gravelly or sandy loam combined with manure will prove equally beneficial.

SOILS IMPROVED BY DRAINING.

On wet lands manure should never be applied at all. Let such lands be thoroughly drained, and in most cases it will be found that no manure is needed; the soil being already supplied with a sufficiency of vegetable matter, which, having been kept in an insoluble state by an excess of moisture, will, under more favorable circumstances, become decomposed, and furnish abundant support to vegetation. But when it is needful that manure should be applied to lands of this description, thorough draining should, in every case, precede the application, and then the expense will be remunerated.

[To be continued.]

CONSUMPTION OF COTTON.

A series of articles in the course of publication in the Boston Advertiser, addressed to the cotton manufacturers of Massachusetts, are replete with interest to that branch of industry, and contain much that is useful to the merchant and planter in reference to this great staple.—Without concurring in the views of the writer in regard to prices, which it is considered "will decline below existing rates," and for which various reasons are assigned—most of them however, contingencies, which may or may not happen, we extract the following remarks upon the consumption of cotton in Europe:

"If the gross products of the nations of Europe were as great as in this country—taxation as inconsiderable, and property as equally distributed among the masses of the people as with us—why the consumption of cotton in Europe, instead of being limited as it now is, to about 1,800,000 bales, would be extended to 4,166,666 bales. The truth of that assertion may be seen by taking the consumption of this country at 260,000 or 270,000 bales—which perhaps is as much as we now require, and adding to that the consumption of imported cotton goods to the extent of $6,000,000 or $8,000,000—and thus allowing the aggregate consumption 300,000 bales.

The population of Europe is about 250,000,000. If then our population of 18,000,000 consume 300,000 bales of cotton, it follows that a population of 250,000,000, having an equal consuming ability, would consume 4,166,666 bales.

The consumption of cotton in Europe is rapidly increasing under the increasing industry, skill, economy, and the general prosperity incident to a long continued peace. The average of our crops in 1820 and 1821, was 136,000,000 pounds—and Mr. Clay, in one of his speeches in favor of converting cotton growers into the manufacturers of cotton and of other raw materials, gave it as his opinion on which he founded his arguments, that the world was too full of cotton—the consumption having reached its *maximum*.

"We have reached the *maximum of foreign demand* for our three great staples, cotton, tobacco, flour," &c. Thus said Mr. Clay in 1820, when our crops of that staple averaged for 1820 and 1821, 137,000,000 pounds. The coming crop will not fall short, as is generally supposed, of 940,000,000 pounds, and may exceed *one thousand millions of pounds*.

It is true, as we have contended, that production of cotton is in advance of its consumption, but the extreme low prices to which it will probably fall if the crop is as large as estimated—will first discourage cultivation to some extent in Asia, as far as European consumption is relied upon. Secondly, the fall in the value of so important and useful a staple, to prices far below those of any other manufacturing materials which can be brought into competition with it, cannot fail to augment its consumption to a great extent. That, however, will not take place in season to sustain existing prices of the present crop, because an increased consumption greatly beyond what has ever before been experienced, will still leave a heavy surplus at the close of this year, *far beyond that of any former period*.

As to a "maximum of consumption," it is an absurdity—since it implies that mankind are stationary, not only in their wants and in their increasing means of gratifying them, but in numbers also—whereas, since the fall of Bonaparte, and the return to a general peace, the population of most of the nations of Europe has increased in a greater ratio than at any anterior period.

Again, the means of consuming cotton and of many other products, which, in a state of war, are beyond the consuming ability of European population, have been increased two or three fold, and the longer the general peace is maintained, the greater will be the ratio of consuming ability, not only of cotton, but of all the great staples of commerce.—*Mobile Register*.

THE COTTON TRADE.

It will be seen by the quotations of cotton in the various prices current of the day, that the range of prices is from 4¼ to 6¼ or 8 cents, embracing the extreme limits. It is the first time in the history of this important staple that the price has ever touched so low a point. During the embargo or non-intercourse of 1808 and 1809, and the war of 1812 and 1813, the prices never went down within one or two cents as low as it is at the present period. The following table, taken from Hunt's valuable magazine, exhibits the value and price for the last 21 years.

Years.	*Millions of lbs.*	*Av. price.*	*Value.*
1820	160	17 cts.	27,200,000
1821	180	16	28,800,000
1822	210	16½	34,650,000
1823	185	11	20,350,000
1824	215	15	32,250,000
1825	255	21	53,550,000
1826	350	11	38,500,000
Tot'l 7 yrs.	1555	15½	234,675,000
1827	270	9½	27,700,000
1828	325	10¼	40,625,000
1829	365	10	36,500,000
1830	350	10	35,000,000
1831	385	9¼	35,612,000
1832	390	10	39,000,000
1833	445	11	48,950,000
Tot'l 7 yrs.	2530	10	263,537,000
1834	460	13	59,900,000
1835	416	16½	68,940,000
1836	455	15½	67,862,500
1837	485	15½	73,962,500
1838	525	10¼	53,812,500
1839	566	14	79,240,000
1840	880	9½	83,600,000
Tot'l 7 yrs.	3777	13⅛	487,117,500

This is a highly interesting table. The growth since 1840 is not given, but that of 1842, it is believed, will reach two and a quarter millions of bales.

The increased growth of cotton, and the rapid reduction in price, are subjects of much speculation. If the cotton planters of the South could realize the average prices, ending 1840, viz: 13⅛ cents, what an immense difference there would be in the value of the crop. But reduced as it is to 6 or 6¼ cents, the difference is truly great. The fall however must, in the end, be less injurious to our Southern planters, than to the people of any other country, The upland cotton of this country is a favorite with the manufacturers, as they prefer it to any other short staple, owing to its working more kindly in the machinery. Its low price will therefore go far to drive out of the European markets every other description.

The low price of the raw material both here and in Europe, will also affect the price of the manufactured article. Domestic goods, which have been selling at very low prices, will be afforded still lower. It is also understood that the manufacturers in this country have very light stocks of the raw material on hand, consequently they will not be sufferers by the late fall in the price of this article. The export of domestic goods is greatly increasing. The export of cotton from this country to India, owing to low prices, is also becoming very considerable.—*N. Y. Express*.

Book Farming.—Show me a thrifty, practical and experimental farmer, and I will show you a man who reads works on agriculture, or who borrows his hints from a neighbor who takes agricultural papers.

Show me a farmer whose fences are going to decay; whose half starved cattle are strolling over a brush field; and I will show you a man who, if he is not on the retrogade track, takes too little interest in agriculture to patronize an agricultural paper.—*Farmers' Cabinet*.

EXPERIMENT WITH SALT AS A MANURE FOR WHEAT.

In Johnson's Agricultural Chemistry, already mentioned, are contained some highly important experiments on wheat fields, by Wm. Fleming. Mr. F. gives the result of eight different kinds of manure on the eighth of a Scotch acre of wheat. The two most important are, Nitrate of Soda, 80 lbs., Rape Dust 5 cwt. to the acre, which produced 240 lbs. of wheat, weighing 62¼ lbs per bushel, on one eighth of an acre.

Common salt, 160 lbs. to the acre, produced 219 lbs. of wheat, weighing 62¼ lbs. per bushel, on the same quantity of ground. While the same measure of land, without any manure, produced only 90 lbs. of wheat, weighing 61 lbs. to a bushel. The salt is therefore the most economical and productive manure used by Mr. F. in his course of experiments.

Five bushels of Liverpool salt to the acre is said to produce great effect on any crops, either of grass, grain or roots. More than six have been found to be injurious sometimes. The use of salt as a manure was early known by the Romans and other nations of antiquity, but has been little understood or practised in modern times. It is somewhat extraordinary that this important item in the cultivation of the earth should have gone into disuse on the sea coast especially, where the inexhaustible fountains of the deep are continually dashing their briny billows at the feet of the cultivator. But modern experience has demonstrated its usefulness, whenever it has been tried.

It is also destructive to insects, the greatest enemies of the vegetable kingdom; and if it had no power as a manure, this alone makes it more valuable to the world, than all the preventatives which the ingenuity of man has been able to discover against the innumerable hosts of these depredators, with which the earth is infested.

A thin sprinkling of green sea-weed, salt hay, sedges, or any other marine vegetable, on pasture, old meadows, or plowed land, contains sufficient salt to produce most suprising effects, if spread so sparse as to let the grass grow freely through it, and to admit the rays of the sun to the earth. Like every other powerful, concentrated manure, a *little too much* destroys vegetation for a time.—*Conn. Farmer's Gazette*.

SIX REASONS FOR PLANTING AN ORCHARD.

BY EDSON HARKNESS.

1st. Would you leave an inheritance to your children?—plant an orchard. No other investment of money and labor will, in the long run, pay so well.

2d. Would you make home pleasant—the abode of the social virtues?—plant an orchard. Nothing better promotes among neighbors a feeling of kindness and good will, than a treat of good fruit, often repeated.

3d. Would you remove from your children the strongest temptation to steal?—plant an orchard. If children cannot obtain fruit at home, they are very apt to steal it; and when they have learned to steal fruit, they are in a fair way to learn to steal horses.

4th. Would you cultivate a constant feeling of thankfulness towards the great Giver of all good?—plant an orchard. By having constantly before you one of the greatest blessings given to man, you must be hardened indeed if you are not influenced by a spirit of humility and thankfulness.

5th. Would you have your children love their home—respect their parents while living, and venerate their memory when dead—in all their wanderings look back upon the home of their youth as a sacred spot—an oasis in the great wilderness of the world?—then plant an orchard.

6th. In short, if you wish to avail yourself of the blessings of a bountiful Providence, which are within your reach, you must plant an orchard. And when you do it, see that you plant good fruit. Don't plant crab apple trees, nor wild plumbs, nor Indian peaches. The best are the cheapest.

REFORMATION, OR BANKRUPTCY AMONGST PLANTERS IN THE COTTON STATES.

It does not require the prescience of a prophet to deter nine that cotton planters must make considerable retrenchments of expenditures, or submit to ruinous sacrifices of property. At the present prices of cotton, even his six bales of cotton to the hand, with his supplies of stock and provisions, will not more than save his capital, without affording any surplus, or very little, for the support of his family. The hopes of a better market have so long deluded the cotton planter, that further disappointments cannot be borne; while a revolution in the market, for the better, is very uncertain, at least for a few years yet. The most rigorous economy must be submitted to, or bankruptcy. "A prudent man foreseeth the evil, and hideth himself; but the simple pass on and are punished."—When too late, many will learn that it had been wiser to live a few years upon bread and water, and wear sackcloth, than to cast their children, unaccustomed to labor and hardships, upon the world, to live by the sweat of their brow, or perish. Two or three years of rigid economy in dress and equipage, with a double energy in the increasing and saving productions of our plantations, (if not too late,) may secure independence, when one year more of usual extravagance would prove ruinous. Most planters have, no doubt, taken the alarm, and have made double effort to increase productions, raise all their stocks and provisions, and have ceased speculations. This might have saved a wreck, with a cotton market averaging 8 cents; but this will not now do, the reformation must go further. Not 50 per cent must be cut off from the expenses of high living, dress and equippage. To human nature, this will be like plucking out the right eye. It is pleasing to human nature to climb to high stations of life, but revolting to dome down; yet it is better to walk down than to fall. Parents personally may submit to the self-denial; but giddy sons and daughters will not see or feel the necessity. For parents to have the moral courage to enforce a law of rigorous retrenchment, against the murmurings, entreaties, or haughty insinuations of children, will require almost the holy fortitude of Abraham in offering up his son Isaac. It will not be hard for you, parents, to return to your old-fashioned homespuns again, as in old times. But what think you of reducing your sons' cloth from $8 or $10 to $4 or $5 per yard, and other expenditures in proportion? What think you of substituting for the piano the needle and thimble? Of encouraging the honest industry of daughters, instead of the extortion of tailors and mantua-makers? Of substituting a plough and mule for your son's hounds and hunter? Think as you may, reformation must be extended in all of these classes of expenditures, more or less, or suffer worse consequences, if cotton planting is your only source of income. If planters in general would commence with simultaneous action in the work, the mountain would be soon levelled to a plain. Custom would remove the mortification of seeming inferiority. Let those whose circumstances would enable them to bear the pressure, as patriots, set the example, and the victory is gained.—Further, such a rigid course of making and saving would inspire confidence in creditors, and thereby indulgence would be secured. The unfeeling creditor who would grind and oppress the honest debtor who was making every edge cut, and even cutting off many of the common comforts of life from his family, in order to pay his debts, would bring down the indignation of the public mind upon himself, and excite the sympathies and secure friends in behalf of the honest debtor. We have already witnessed a benevolent and noble disposition with creditors, (with a few exceptions,) to indulge where there is confidence of security, and especially among our bank officers. And if the frugal, saving and honest planter, after all his hard struggles and sacrifices of comfort under a depressed market and distracted currency, beyond the calculations of the most experienced commercial men and wisest financiers, should fall by the hands of his oppressor or some unfeeling speculator, there will be a refuge for the oppressed, who has fallen under honest struggles instead of extravagant living, which will enable him to go down to his grave in peace. And if he leaves his family to inherit honorable poverty, it will prove a better legacy than dishonorable wealth.

If the planters, however, will, in time, with determined purpose, carry into full effect the doctrine of retrenchment; look well to their own plantations, rather than trust too much to overseers; raise all that can be raised for the use and consumption of their plantations; put their sons to the plough and daughters to the needle; feed negroes and brutes well, and make all move in their stations; bring overseers to the mark, and make them bestir themselves, or dismiss without ceremony. Let them also take an agricultural paper, and believe nothing they read there without good evidence; nor reject any discovery with evidence; and one article may afford them sufficient information to pay 500 per cent on the cost of the paper. Let them look well to their legislators, vote for men of sound wisdom, of pure moral and patriotic principles, who can and will speak and act when necessity calls for it. Let them take care of weathercocks and popinjays. Let creditors be patient and merciful. Let debtors be honest and candid, paying as fast as possible, and avoid all low devices towards their indulgent creditors; and, above all, pray for blessings upon their honest labors, to Him who alone can give the increase, and can make *hard times* prove blessings in disguise. But take warning, planters, and be at least as wise as the burnt child; risk no more speculations or big debts, (even if cotton should ever rise again to 20 cents per pound,) and if you do, calculate to pay debts at the rate of six cents, and you will be sure to make a saving calculation, and not risk the ruin of your estate again. If cotton rises, still raise your stock and provisions; stock makes manure; too much cotton allows no time to make manure; a few acres well manured makes more than treble worn out. Seed your waste lands with valuable grasses, which raises stock with the least expense, saves or improves lands, and will not be in the way of cultivating or picking out the cotton crop. The Kentucky hemp-grass is thoroughly proven to suit our soils and climate, and one sowing is for life, easily killed when needed, and affords grazing all winter. The herds grass is also proven and will grow best on marshes and branch bottoms fit for little else, and grows in winter, and in March covers the ground with verdue. We have native summer-grasses plentifully, and if we secure winter pastures, little expense of grain will be required to excel Kentucky in stock, as our climate favors the winter growth of grasses better, and our winters are milder, and therefore favorable to raising stock. If the depressed state of our cotton market should drive planters to economy in living, to improving lands, raising stock, diminishing the production of cotton in our own cotton States, and driving the Indian cotton planter out of market, all will work together for final good, (if not wrecked in the storm,) and one year more, perhaps, of arduous and prayerful perseverance, the danger may be over, and Carolina planters in the harbor of safety.

MONTICELLO.
Planter.

☞He is a public benefactor who, by the prudent and skilful outlay of his time and money, shall make a single field yield permanently a double crop; and he who does this over a square mile, virtually adds a square mile to the national territory—nay, he does more: he doubles to this extent the territorial resources of the country, without giving the state any larger territory to defend. All hail, then, to the improvers of the soil! Health and long life be their fortune—may their dreams be few and pleasant, and their sleep the sweet repose of the weary—may they see the fruits of their own labor, and may their sons reap still heavier harvests.—*Black. Magazine.*

TO FARMER'S DAUGHTERS.

I have talked to you so much about every day business, you will think it the only matter I consider any way important; I can assure you this is a mistake. I look upon mental culture as of equal moment, but as all the wise heads in creation discuss this topic, I leave it with them, and again take up the old theme of work, work.—"spring time of year is coming," or to use the language of the old poet Solomon, "the winter is past, the rain is over and gone, the flowers appear on the earth, the time of singing of the birds has come, and the voice of the turtle is heard in our land." Nature will soon enrobe herself in her rich green mantle, tastefully interwoven with flowers of every hue, from the colourless lilly, to the deep dye of the rose and peony. Now, you can assist the noble Dame in the arrangement of her toilette. She is like some other ladies, and loves to be decked with bright ornaments.

You can embroider the hem of her garment, put here a leaf and there a flower; in another place a small tree, shrub or vine, and you may finish off with an edging of Purple Shade, or rows of White Fringe or Purple, as may suit your taste. Should any parts of her mantle be neglected, fill up with a rich border of strawberries, and dot with the golden pear, snow peach or blue plumb.

But to go on in a plain old fashioned way, now is the time for gardening, and as it is a most delightful employment, I want to speak to you of your taking an interest in it. There is none more calculated to improve the minds, as well as the physical powers of the young. It has a more soothing and happy influence than almost any other. Go into the garden when you are listless and low spirited, (as you often find yourselves when you do nothing useful) plant some shrubs or flowers, set out a bed of strawberries, use the rake or hoe industriously in finishing off borders, form a plantation of raspberries or any thing else necessary or pleasant, and by the time you feel like resting, all your hyppo will be gone, and you will wonder why you have not found out before, that the garden is the place to frequent, if you wish to be vigorous and in good spirits. The rage for flowers of all kinds is becoming so fashionable now, that any one who is not fond of them is almost wondered at. In this part of the country you see ladies handling the spade and other tools.

Spading, hoeing and raking are quite *a la mode* in our region. I was riding through town some time since, and passing a garden where every thing was in a flourishing order, I noticed a lady with her spade, and her manner of using it could not have been excelled by Gen Jackson himself. The gentleman who was with me, has not done praising her yet. You may say, I have no taste for flowers. The right way to obtain this is to go to work. I knew a young lady who had no fondness at all for flowers, and never thought of cultivating any. She received a present of a rose or some other little shrub in a box. At first she cared but little for it, but after a time, when the buds began to expand, she was attracted by its sweetness and beauty, and by degrees her love for it increased, until she wondered she could care so much for a flower. She began to collect slips of different plants, to tend them with the most watchful care, and she soon had a very pretty collection. Now every little bud that blows, every fresh leaf that puts forth, seems to give her so much pleasure, and she would not be deprived of the enjoyment their cultivation affords, for any consideration.

If your homes are destitute of flowers and shrubs, you could, in a short time, so much alter their appearance by planting them out. You can do it yourselves, and you will take more interest in them than if your parents were to do it. In travelling I have passed so many houses where not the least flower might be seen, and the thought always came over me, there is not much care taken at that place to render life pleasant—to throw around the inmates any of its sweetnesses; to lead them to refinement and

love of home; and again, when I have passed a cottage surrounded by trees, shrubs, vines and flowers, I have thought there is the abode of a woman of delicacy and taste. It is really cheering to the eye of the weary traveller to meet with these things, and he would rather stop to rest, where pains had been taken to tend them, than where it was desolate and bare.

I speak of these things, because it is peculiarly the province of woman to study whatever makes life agreeable and divests it of what is unpleasant. The more sources a woman has of enjoyment, the better it is for her. It is her lot, if she is domestic and discharges her duties as she ought, to stay at home; it is her lot to be often alone, and also to participate largely in the cares and anxieties of life. Active exertion is often a relief to many of these, and in no part of her establishment can she make it with so much pleasure, as in her garden. Girls should learn more of these things, so that when settled, they may seek for enjoyment at home, by performing their duties, and not make it their chief enjoyment to visit and pass about from place to place. I would say again to you, to go to work, cultivate the useful and beautiful, and you will not regret the time you have thus spent. You will not look back and say, it was unprofitably employed. LUCY.

Tennessee Agriculturist.

TREATMENT OF COWS—BUTTER MAKING.

Change of Pastures.—To insure the production of the largest quantity of butter, a frequent change of pasture is required. A farm should be so fenced that the cows can be changed into a very different lot every four or five days.

Salting.—A constant and full supply of salt should lie before our cows in some secure place. They will eat moderately what they require.—If only occasionally furnished, they often take it in quantities so large, as to act medicinally to their injury. It corrects almost any bad quality of the milk, arising from the eating of aromatic or bitter herbs, and also much of the natural animal odor, that frequently impairs the sweetness of butter.

Driving—kind treatment.—Many a faithful cow has been seriously injured by a careless boy driving her furiously to and from the pasture. All harsh treatment of any kind, as scolding, striking, kicking, &c. is all detrimental. I have known many cows rendered worthless from these causes. The utmost kindness and gentleness of manner must be shown on the part of those who manage our stock.

Milking.—This process should be done systematically, at regular periods of the day. Sunrise and sunset are perhaps the best periods; for immediately after the one, and before the other, cows in hot weather feed to the best advantage. They are so much creatures of habit that the milker should be changed as rarely as possible. A stranger is always regarded as an unwelcome visiter, by a milch cow.

Cleanliness with the utensils.—The pans, pails, strainers, bowls, churn, and every implement employed in butter making, must not only be well washed, but they must be thoroughly scalded with boiling hot water, and be perfectly dried afterwards, either in the sun or before the fire. This must be repeated every time they are used. Merely pouring boiling water upon them when loaded with sour milk or cream, will only serve to scald in the bad flavor, if I may use the expression. Wash them at first, and then scald them thoroughly, if you would have sweet butter.

There are certain filthy practices which slatterns fall into, that should be corrected; such as wetting the cow's teats with milk, and permitting it to drop into the pail; milking in the morning without washing their hands, &c.

Milk-house and Buttery.—In hot weather a good spring-house is necessary for the making of butter. It must be constructed of either brick or stone, and in no instance of wood, as that article never fails, in such a situation, to become mouldy, and impair the flavor of butter. It must be built so that it can be thoroughly ventilated. A window should be placed on the north, east and west sides, which must be furnished on the outside with wire gauze screens, and on the inside with tight shutters. During the day, the shutters must be closed, and at night must be raised.

A spring may be dispensed with—and it is even problematical whether it does not, upon the whole, do as much injury by imparting dampness, as it does good by lowering the temperature. A well constructed house without the spring, will answer the purpose. It should be shaded with trees or arbors of grape vines. All mouldy and decaying wood-work, boards, boxes, &c. must be kept out of it; also all foreign substances, as meats, fish and vegetables. The air of my spring-house was ruined for a week or more, merely by placing in it a few mackerel.

Skimming the Milk.—In hot weather the milk may be allowed to curdle before this operation is performed, but if it be delayed any longer, a thin, watery fluid will form between the milk and the cream, after which the good qualities are inevitably destroyed. It is necessary, in midsummer, to skim the milk every morning and night. This point must receive the strictest attention. Neglect of it often gives a streaked or mottled appearance to butter, as well as impairs its flavor.

Cream.—As soon as it is collected, it should be placed in a stone crock, which should either be hung into a well, or set up to the brim in the spring within the milk-house.

Churning.—This operation must be resorted to as soon as a supply of cream is obtained, and in hot weather cannot safely be delayed beyond the third day.

A variety of patent churns have been palmed upon the public, none of which, we believe, is to be preferred to the old fashioned upright dasher, or the barrel.

Working of Butter.—This must be repeated until every drop of the buttermilk is expelled; twice or three times will be necessary, nor must it be delayed too long, till a change begins to take place in the remaining buttermilk, as that will impair the flavor of the butter, which no subsequent treatment can restore.

Salting.—The salt should be added at the commencement of the first working. Much of our western butter is injured by the employment of the common New York salt. The finest *ground* articles should be used. It can now be obtained in sacks, of our merchants, at reasonable price.—*Cleavetand Herald.*

MILKING.

Cows that are milked quick and stripped clean will give more milk than if they are managed by moderate milkers. The reason is, that whatever milk is left in the udder dries up, and a cow will shrink in her milk permanently in proportion to the quantity that is allowed to dry up. If half dries up, she will soon be reduced to half her natural flow of milk; just as she will dry totally up if her milking is totally neglected.

When a milker approaches the cow, the animal is said to "give down" her milk. From that moment it should be withdrawn as rapidly as possible; the longer it or any of it remains in the udder, the more of it begins to dry up, even during the operation of the milker. Very much depends upon rapidity and fidelity in the milker, in order to boast truly of having an excellent cow for milk. We have known cows that in certain hands gave enormous quantities of milk, and as soon as they were sold to a villager, who trusted to his hired girls to do the milking, they begun to shrink, and soon the cows lost their reputation, and the men of whom they purchased were denounced as liars, cheats and every thing else that is bad. The secret of this faultfinding might be traced to the girl, who either was very slow in milking, or who had not patience enough to strip the cow very clean.

If a cow was not managed aright when she had her first calf, it will be almost impossible to make her great for milk as long as she lives. The first experiment with her is a final habit.—No heifer, after calving, should be trusted to inexperienced, unkind or unfaithful hands. She should be treated gently, fed well, and milked regularly—at just such hours—and milked quickly and as long as half a dozen drops can be forced from the udder. She should, too, be milked as nearly as possible up to the time of her having the next calf. By such attention, she will be likely to prove a valuable animal; one that will give much milk, hold out long, and be manageable every way by her attendants.

Learners should be taught the art of milking on cows that are being dried off. And one of their first lessons should be to clasp the teat very near its extremity. This will hurt the cow least, and be worked easiest to the milker. They should also bear the left arm moderately against the leg of the cow. She cannot then kick, or if she attempts it, by raising her foot, the milker will be ready to ward off and protect herself and pail from any sad consequences. Thus guarded, let them make as brisk work of milking as possible—treating the cow gently, and withdrawing all the milk faithfully, and there will be a chance for the security of two good things—a good milker and a good cow.—*Gos. Banner.*

NIGHT SOIL.

To the editors of Tennessee State Agriculturist:

There is much said in your and other agricultural journals, about the advantages of night soils, as a manure. One of your subscribers in this part of the country, wishes to be informed about the matter as follows:

1. What is it mixed with, and in what proportion to destroy all disagreeable odor?

2. What is it mixed with, and in what proportion, to prepare it for the soil?

3. How is it used as a manure, for top-dressing, sowed broadcast, or put in the ground and covered. Please give the whole modus operandi, and all else that you may deem necessary on the subject. Give the desired information thro' your paper. Very respectfully.

R. HOUSTON.

REPLY.

The above enquiries we consider of vast importance to all who till the earth far a support. Agricultural chemists and the most intelligent farmers and gardners, agree in commending night soil, or human excrements, above all manures. Its superiority arises from the fact that it contains a greater quantity of ammonia than other manures. The preparation is a simple process, and attended with very little expense or labor. Mr. Woolfin, in the Southern Planter, gives his mode of making and applying Poudrette, which not only accords in the main with other writers, but the process is presented in such a manner it cannot be misunderstood.—He says:

"I collect the stercoraceous matters separately in large vessels or hogsheads, after the urine has become putrid, which will require but two or three days in warm, and ten or fifteen in cold weather. I then add sulphuric acid to the urine slowly; if the urine is putrid, a powerful effervescence will immediately take place; the acid must be added until effervescence ceases. By this process, the carbonic acid in combination with the ammonia, is disengaged and driven off, and sulphate of ammonia is formed, which has no volatility, except at a very high temperature. Thus you secure the ammonia formed by putrefaction, which otherwise would escape. I then add the liquid to the solid excrements, incorporating them well together, until a very thin batter is formed; into this mass I stir in finely pulverized charcoal, according to my judgment, without regard to any precise quantity; this done, I spread the mass upon boards made tight, in the open air—stir frequently until the whole is dry, then pulverize with a spade and barrel it up for the use of crops.

My drying boards are protected from the weather by a shed open to the south, so as to receive the benefit of the sun. Manure made in this way I call Poudrette, and of its value I

can speak in the highest terms. When properly made, it is inodorous, and the application to crops easy, and the effect powerful. I made an experiment with it last season upon sugar beet, in comparison with bone dust, bone dust and stable manure mixed, and stable dung alone. The beets manured with poudrette, came up quicker, grew faster, and maintained a decided superiority to the last, making the largest and best beets; the quantity of poudrette was only a small train to each drill. I used it also upon corn with entire success. In this experiment I subjected it to a very severe test; I selected a very poor spot, put only one and a half gills to the hill as a top dressing, at the time of planting, and the result was truly astonishing, proving it to be beyond all doubt a manure of great strength and power, perhaps surpassing all others now known.

It must in all cases be used as a top dressing; such is its strength when planted with seed, the germ is destroyed, and consequently does not come up."

In addition to the above, farmers and others who wish to prepare night soil, must be careful not to mix lime, or soil with a large proportion of lime, with it. If sods and earth of almost any kind were placed so as to absorb the excrementitious matters, and applied to crops in this manner, no doubt they would be much increased. Liebig said, a pint of urine would produce a pound of wheat; we may safely calculate other crops would be as much benefitted. We wish to hear if any of our readers have experimented with night soil, and with what success.

Comparative nourishment of different Vegetables.—If, as an article in the last Cabinet, signed "Vir," states, "the differences of opinion with regard to the value of root crops, as cattle feed, are indeed about as different as light is from darkness," the following table, showing the comparative nourishment of some of the principal kinds of vegetable food, may possess interest. The table was formed by Boussingault, an eminent French chemist—and he tells us that he compared the result of his experiments with the practical experience of farmers in feeding cattle, and found "a most remarkable coincidence between the theoretical and practical inference." The table is from a late number of the Boston Medical and Surgical Journal, and is as follows:

White French beans	100
Yellow peas	120
Farina of cabbage	148
" of carrots	170
" of wheat	175
Wheat	191
French wheat	193
Rye	200
Farina of barley	212
" of potatoes	225
Barley	232
Indian corn	246
Potatoes	1096
Carrots	1361
White cabbage	1446
Turneps	2383

"Thus we see that 100 parts of white French beans are equivalent in nutritive power to 110 parts of yellow peas—to 1096 of potatoes, and 2363 of turneps. A farmer, for example, in feeding cattle, would find that 420 parts of yellow peas, would go as far in keeping up the strength and efficacy of his cattle as 2383 parts of turneps. Or it would require more than 23 bushels of turneps, or 2 bushels of rye, to be equal in nutritive power to one bushel of white French beans.

These statements, it is believed, may be relied upon as approximating the truth; though the fact, that it should require nearly two bushels of wheat to equal in nutrition one of beans, may be a little too many. When farina is given, as of cabbage, potatoes, &c. the meaning is, that the article was dried and reduced to flour, by grinding or otherwise.—*Farmer's Cabinet.*

COMPARATIVE VALUE OF DIFFERENT KINDS OF FODDER FOR CATTLE.

A table of the comparative value of different kinds of fodder for cattle has been published by M. Antoine, in France, and is the result of experiments made by the principal agriculturists of the continent, Thaer, Gemerhausen, Petro, Rieder, Weber, Krantz, Andre, Block, De Dombasle, Boussingault, Meyer, Plotow, Pohl, Smee, Crud, Schwertz, Pabst. It is unnecessary to give the figures which each of these experimentalists have set down, but the mean of their experiments being taken, there is more chance of the result being near the truth. Allowance must be made for the different qualities of the same food on different soils and different seasons. In very dry summers the same weight of any green food will be much more nourishing than in a dripping season. So likewise, any fodder raised on a rich dry soil, will be more nourishing than on a poor wet one. The standard of comparison is the best upland meadow hay, cut as the flower expands, and properly made and stacked, without much heating; in short, hay of the best quality. With respect to hay, such is the difference in value, that if 100 lbs. of the best is used, it will require 120 lbs. of a second quality to keep the same stock as well, 140 lbs. of the third, and so on, till very coarse and hard hay, not well made, will only be of half the value, and not so fit for cows or store cattle, even when given in double the quantity. While good hay alone will fatten cattle, inferior hay will not do so without other food.

100	lbs.	of good hay is equal in nourishment to
90	"	" hay-made clover, when the blossom is completely developed.
88	"	" ditto, before the blossom expands.
98	"	" Clover, 2d crop, is equal in nourishment to
98	"	" Lucerne hay,
89	"	" Sainfoin hay,
91	"	" Tare hay,
146	"	" Clover hay, after the seed,
410	"	" Green clover,
457	"	" Vetches or tares, green,
275	"	" Green Indian corn,
541	"	" Cow-cabbage leaves,
374	"	" Shelter wheat straw,
442	"	" Rye straw,
164	"	" Oat Straw,
153	"	" Peas halm,
159	"	" Vetch halm,
201	"	" Raw potatoes,
175	"	" boiled "
339	"	" Mangold wurzel,
504	"	" Turneps,
276	"	" Carrots,
308	"	" Swedish turneps,
305	"	" do do with the leaves on,
54	"	" Rye,
45	"	" Wheat,
54	"	" Barley,
59	"	" Oats,
50	"	" Vetches,
45	"	" Peas,
45	"	" Beans,
64	"	" Buckwheat,
57	"	" Indian corn,
68	"	" Acorns,
50	"	" Horse chesnuts,
62	"	" Sun flower seed,
69	"	" Linseed cake,
105	"	" Wheat bran
109	"	" Rye bran,
167	"	" Wheat, pea and oat chaff,
179	"	" Rye and barley chaff.

Lattermath hay is good for cows, not for horses. The second cut is generally considered as inferior in nourishment to the first. New hay is not wholesome. At Paris, when a load of 1000 kilos is bargained for, the seller must deliver—if between hay making and October 1, 1300 kilos—and after April, only 1000. This is fair, and allows for loss of weight in drying. In London, a load of new hay is 20 cwt., of old hay, only 18 cwt.

The dried half of the Trifolium incarnatum, after the seed is ripe, is little better than straw. Clover, lucerne and sainfoin, are generally supposed to lose three-fourths of their weight in drying; but in general they lose more, especially in moist climates, where the sap is more diluted. When touched by the frost, they become very unwholesome, and should never be given to cattle except quite dry.

Straw is, on the whole, but poor food, and unless cattle have something better with it, they will not keep in any condition; when given with turneps or other roots, straw corrects their watery nature, and is very useful; cut into chaff it is very good for sheep when fed on turneps, and when newly thrashed is as good as hay. By a judicious mixture of different kinds of food, a more economical mode of feeding may be substituted for a more expensive one, and the same result obtained. The value of straw depends much on the soil: a very clean crop will not give so nourishing straw as one containing many succulent weeds. Peas and vetch halm are superior to straw, especially when cut into chaff: it is by some thought equal to hay. The same may be said of bean halm not left too long in the field, and cut before it is completely dry. Buckwheat halm is of little value: it is thought unwholesome if given to sheep.

16 lbs. of raw, or 14 lbs. of boiled potatoes will allow a diminution of 8 lbs. of hay.

Turneps will feed store pigs, but they will not fatten on them. Carrots and parsnips are excellent for horses, and, when boiled, will fatten hogs. Ruta baga is liked by horses; it makes their coats fine, but must not be given in too great quantity, or it will gripe them.

Feeding.—A certain quantity of food is required to keep an animal alive and in health: this is called his necessary ration of food: if he has more, he will gain flesh, or give milk or wool.

An ox requires 2 per cent of his live weight in hay per day; if he works, he requires 2½ per cent; a milch cow 3 per cent; a fatting ox 5 per cent at first; 4½ per cent when half fat; and only 4 per cent when fat; or 4½ on the average. Sheep grown up take 3½ per cent of their weight in hay per day, to keep in store condition. Growing animals require more food, and should never be stinted.—*Jour. Royal Agr. Society.*

EXERCISE.

Many people look upon the necessity man is under of earning his bread by labor as a curse. But it is evident from the structure of the body, that exercise is not less necessary than food for the preservation of health; those who labor are not only the most healthy, but generally the most happy part of mankind. This is peculiarly the case with those who live by the culture of the ground. The great increase of inhabitants in infant agriculture every where, evidently proves it to be the most healthy, as well as the most useful employment.

Next to total abstinence from all intoxicating drinks, nothing contributes more to the preservation of health than early rising and exercise in the open air in the morning, when the air braces and strengthens the nerves. Custom soon renders early rising agreeable.

Every person should lay themselves under some sort of necessity to take exercise. Indolence, like other vices, when indulged, gains ground, and at length becomes agreeable.—Hence many who were fond of exercise in the early part of life, become quite averse to it afterwards. This is often the case with gouty or hypocondriac persons, and frequently when their diseases are difficult to cure.

Indolence not only occasions diseases, and useless to society, but promotes all manner of vice. The mind if not engaged in some useful pursuit, is constantly in quest of some ideal pleasures. From these sources proceed most of the miseries of mankind. Certainly man was never intended to be idle. Inactivity frustrates the very design of his creation, whereas an active life is the best and greatest preservation of health.—*Oracle of Health.*

WEDNESDAY, MAY 3, 1843.

BACK NUMBERS.—All new subscribers to the "Southern Cultivator" can be supplied with the back numbers.

SPLENDID BERKSHIRES.

Within the last few days we have enjoyed the pleasure of looking upon the finest specimens of the Berkshire hog that we have ever seen, and we doubt not the finest ever introduced into the Southern States. They are a recent importation, eight in number, of our enterprising fellow citizen, Col. JOHN BONNER, of Green county, who has so deservedly distinguished himself as a breeder and raiser of fine hogs at the South. Two of them, *Ontario* and *Lady Huttleston*, decidedly the best specimens of the hog we ever saw, were imported from England by the Messrs. Brentnall, of New York, and were bred by that celebrated English stock raiser, SIDAY HAWES. The other six, one of which is a male, were bred in America, and for high form and fine symmetry are truly models. Col. BONNER deserves much at the hands of his brother planters in Georgia, for the zeal and enterprise he has manifested in the improvement of our stock of hogs, and we sincerely hope, and we doubt not, he will reap a reward commensurate with his merits. Those who desire to avail themselves of an opportunity to improve their stock, can obtain pigs from Col. B. at twenty dollars a pair. Address JOHN BONNER, White Plains, Green county, Georgia.

COTTON SEED FOR COWS.

The *Planter* notices our remarks on the subject of boiled cotton seed as a food for milch cows, and makes the following comments, which appear very judicious:

COTTON SEED FOR COWS.—The last Southern Cultivator recommends boiled cotton seed as an excellent article of food for milch cows. They certainly produce thicker cream, and a greater amount of butter; but we would respectfully suggest to our neighbor, that they will not do alone. They impart an unpleasant flavor to the milk, and give the butter a tallowy texture and taste. If, however, one third (or even one half) cotton seed, with two thirds of corn meal, or peas, are fed to milch cows, they produce very rich milk and butter, and impart no unpleasant flavor. In addition to the unpleasant flavor of the milk, when cotton seed alone are used, we think they tend to impair the health of cows. It is well known that cotton seed contain a very large quantity of oil, (and it is this constituent that makes the cream so rich,) which though wholesome and nutritious in moderate quantities, renders the cotton seed an unsafe food to be used alone, in large quantities, and for a length of time. If used alone, the food should be changed frequently. In the proportions we have mentioned, however, no better winter food for cows can be obtained.

We think every planter would do well to preserve a hundred or two bushels from the weather every fall; but never feed them in the raw state.

CURING SWEET POTATOES.

The subjoined correspondence has been sent us, to which we give place with pleasure, with the hope that it will lead to some valuable suggestions through our columns. We would, therefore, thank those of our planters who have been successful in saving their potatoes, during the winter, to give us their plan, in detail, that we may lay it before the readers of the Southern Cultivator.

—

EATONTON, GA., April 8, 1843.

DEAR SIR—Having accidentally seen an article in the Southern Miscellany, of yours, in regard to raising Sweet Potatoes, and which appears to be much approved of by my neighbors, I would be greatly obliged to you, and take it as a particular favor, (if convenient,) to give me your mode of putting them in the ground; to preserve them from rotting; the mode of hilling them; what is best to be used for the purpose? whether of straw, shucks, corn stalks, &c. &c.

I was so taken up with the article, that I determined to give you a few lines on the subject, for information to myself and neighbors; for they all admire your plan, and intend to follow it, they say, to the very letter; and you may be sure that I shall do so, as I am now just laying off my ground for the very purpose. Please answer this as soon as convenient after its receipt, and pardon me for the liberty which I take with you, for troubling you with this communication. Any other information on the subject will be gratefully received.

Very respectfully, &c.

J. S. PENNIMAN.

Mr. W. MCKINLEY.

—

LEXINGTON, April 14, 1843.

Mr. PENNIMAN—Yours of 8th instant was duly received. I am sorry to say that I have not been over-lucky in *keeping* potatoes; not half so much so as in *making* them. Last fall I was very unlucky, as I was caught by the hard freeze about the 20th of November. The year before I kept them very well, without any potato-house or scaffold, in the open air, covered moderately with broomstraw and earth. They kept soundly all winter. In November, I was careful to let the piles remain naked, (except in frosty nights,) for about ten days, so as to air or dry. You have doubtless noticed that a big potato will shrink much, in a few days, if left lying about a house. This shrinking is caused by evaporation of its juices, and in case of a large bank is very useful, as it lessens heat and sweating. I have no doubt of the constant propriety of this airing or drying of the heaps, when the potatoes are to be kept, as is usual, above ground, and I have observed that some of the inhabitants of the lower country continue this exposure a long time. I remember that one man, a good potato-grower, in Decatur county, once showed me his banks in this naked state so late as Christmas, with nothing over them but a little pine straw—no earth at all.

But if I mistake not, a better way than all, is to keep the potatoes *under ground*, with earth largely mixed among them. This is the *natural* way. Irish potatoes keep so finely. And it seems to me, all we have to do, is just to cover them deep enough to keep them *below the freeze*. Last April I saw potatoes ploughed up as sound and good as in October; and I intend to try this mode next winter. But this, at present, is theory.

A correct answer to your enquiry is very important to the up country, as immense loss is yearly suffered by the mass of people not knowing how to preserve this great article of food; and to secure fuller information, I will send your letter to the editors of the Southern Cultivator, who will, no doubt, call for information on the subject from their readers.

I am glad to learn that you and some of your neighbors will plant in the way described in my letter to the Southern Cultivator, which you saw in the Southern Miscellany. I doubt not you will double your crop. Yours, &c.

W. MCKINLEY.

SOAP MAKING.

Much difficulty is often experienced by those who manufacture their own soap; frequently indeed the operation succeeds well, but sometimes it totally fails from unknown causes. Often when every precaution has been apparently taken, complete failure has been the consequence; and the time is not long past, when some have even declared that they believed their soap was *bewitched*. But if the rationale on which the process is founded, is but understood, the whole becomes simple and easy, and may be performed with absolute certainty of success.

Common soft soap is composed of oil (or fat) and potash. The potash is obtained from common wood ashes, by causing water to run thro' it, which dissolves the potash contained in the ashes, and leaves the residue behind. The manner by which the oil or grease is obtained is well known. These are made to unite and form soap by being boiled and well stirred together.

One of the first requisites in soap making is that there should be a sufficient quantity of potash dissolved in the water, or in other words, that the ley should be *strong:* this is readily ascertained by an egg; if the egg floats the ley is sufficiently strong; if it sinks, it is too weak, and must be increased in strength by evaporating a part of the water by boiling, or by passing it again through ashes.

But it not unfrequently happens that the ley is found by trial to be too strong, and yet good soap cannot be produced. This is almost always owing to the potash of the ley not being *caustic*, or capable of corroding the skin, which state is absolutely requisite to success. Potash in its purest state is highly caustic; but when ashes have been for some time exposed to the air, they gradually absorb from it a portion of the peculiar kind of air, existing in small proportion in it, known by the name of *carbonic acid*, which destroys the caustic properties of the potash and renders it unfit for the manufacture of soap.—Now, as quick lime has a stronger attraction for carbonic acid than potash has, it is only necessary to place a quantity of lime, in the proportion of half a bushel of lime for a hogshead of good ashes, in the bottom of the leech before filling it, and it will abstract the carbonic acid from the potash of the ley, as it passes downward, leaving it in a comparatively pure and caustic state. In order to prevent failure, therefore, this should always be done. In order to ascertain if ley contains carbonic acid, pour a few drops of sulphuric or nitric acid into a wine glass of the ley, when, if it contains much, a violent effervescence (or boiling up of bubbles)

will instantly take place, owing to the escape of the carbonic acid. The carbonic acid may be removed from they ley and rendering it fit for soap making, by boiling the ley with quick lime

If the ley be strong, if it be rendered caustic, and if there be a sufficient quantity of tolerably clean fat, there can be little danger of success. The proportions should be about thirty pounds of fat to eight or ten gallons of ley.

Hard soap consists of soda instead of potash, united with fat; and is commonly made by adding common salt, (which consists of muriatic acid and soda,) to well made soft soap while it is yet boiling. The soda of the salt unites with the fat, and forms hard soap, while the potash unites with the muriatic acid of the salt, and separates by falling to the bottom of the vessel.—Different degrees of hardness in soap are obtained by using potash and soda, at the same time in different proportions. Hence grease from salt meat has a tendency to increase the hardness of soap, unless the salt be removed by boiling in water.

Soap of tallow is made in England, and largely in the United States, and is the best in common use. When scented with oil of caraway seeds and cast into a mould, it is used for the toilet, and is called Windsor soap. Other toilet soaps are made with butter, hog's lard, or with almon, nut or palm oil. Sometimes fish oil is used for coarse soaps, as well as linseed oil; and rosin is often added to give a yellow color and odor. The following proportions, by weight, have been given for a good yellow soap; tallow twenty five, oil four and a half, rosin seven, barilla (soda) eighteen, settlings of waste ley, evaporated and calcined, ten, and palm oil one half part.

Soaps are colored blue by indigo, yellow by tumeric, &c.; and marble or veined soaps are made thus: to the soap just separated from the spent ley, new ley is added, and then copperas dissolved in water, red oxide of iron (or colcother) mixed with water is stirred in it by manual dexterity, and is so mixed as to produce the peculiar appearance.—*Genesee Farmer.*

PREMIUM CROPS IN NEW YORK.

INDIAN CORN—*First Premium*—112 *bushels per acre.*

On the 22d day of May, 1842, I ploughed up one acre of green sward, for the purpose of planting it with corn. After ploughing it once, I harrowed it well, lengthwise of the furrows. I then marked out the ground so that the rows and hills should stand precisely two feet apart either way. On the 25th of the same month I planted it, and was careful to put precisely three kernels in each hill; when it was large enough, I hoed it, and continued to hoe it three different times. No other tool was used in the process of hoeing and cutting up the weeds, but the hoe; being very careful to keep the weeds and grass down as much as possible, and in hoeing, to leave the ground as near level as possible each time.

I permitted the corn to stand until it was fit for harvesting, without cutting or topping.

Between the 10th and 15th of November, I began to husk it, and also to weigh the said corn. I found the aggregate weight from the said acre, in the ear, 13,286 lbs. of a good quality.

About the first day of January, 1843, I thrashed out all the sound corn that grew on said acre and measured it in a sealed half bushel, and weighed it, and found that it fully held out 60 pounds to the bushel, and it produced me one hundred and twenty two bushels of good merchantable corn. My team and man were occupied one day in ploughing the said acre, half a day harrowing, 2 days labor planting, and six days hoeing, and six days harvesting, threshing and weighing.

122 bushels corn, at 37½ cents	$45 75
Expenses	14 00
	$31 75

SAMUEL PHELPS.

Ira, Cayuga co., January, 1843.

HOW TO COOK POTATOES.

There is reason in roasting eggs, says the old adage, and there is not one in a hundred who knows how to roast them properly. Still fewer know how to boil potatoes, simple as the process is deemed. We love a good, well cooked, mealy potato, and all our readers, sensible men as they are, no doubt like the same tuber, but how often do we see the very best potatoes brought on the table, heavy, drenched, saturated with water, and utterly unfit for eating. To prevent such atrocities in future, we copy the following from a poem of some length in the Southern Literary Messenger, devoted to teaching the art of planting and cooking potatoes.

Army & Navy Chronicle.

Wash them clean and scrape the skin off,
One water never is enough,
Take the eyes and nubbins then off,
And every little speck that's rough.

Do not let them lie in water,
(So the nice observers say,)
Not a minute, not a quarter,
That will take the taste away.

When the fire is burning brightly,
And the water's boiling hot,
Sprinkle table salt in lightly,
Then put the kidney in the pot.

Eighteen minutes, sometimes twenty,
Cooks them nicely to a turn,
Some say more, but that is plenty,
Every one must live and learn, &c.

"The following beautiful description of the person of Jesus Christ was found in an ancient manuscript, sent by Publius Lentulus, President of Judea, to the Senate of Rome:

"There lives at this time in Judea, a man of singular character, whose name is Jesus Christ. The barbarians esteem him a prophet, but his followers adore him as the immediate offspring of the immortal God. He is endowed with such unparalleled virtue as to call back the dead from their graves, and to heal every kind of disease with a word or touch. His person is tall and elegantly shaped, his aspect amiable, reverend. His hair flows in those beautiful shades, which no united colors can match, falling into graceful curls below his ears, agreeably couching on his shoulders, and parting on the crown of his head, like the head dress of the sect of the Nazarenes. His forehead is smooth and large, his cheeks without spot, save that of a lively red; his nose and mouth are formed with exquisite symmetry; his beard is thick, and suited to the hair of his head, reaching a little below his chin, and parting in the middle like a fork; his eyes are bright, clear and serene. He rebukes with majesty, counsels with mildness, and invites with the most tender and persuasive language. His whole address, whether in word or deed, is elegant, grave and strictly characteristic of so exalted a being! No man has seen him smile, but the whole world behold him weep frequently; and so persuasive are his tears, that the multitude cannot withhold their tears from joining in sympathy with him. He is very temperate, modest and wise. In short, whatever this phenomenon may turn out in the end, he seems at present a man of excellent beauty and divine perfections, every way surpassing the children of men."

LIME.—If any one doubts the paramount benefits of this article in any soil or situation, let him try half an acre, lime it well, and we think that in four or five years he will extend the application. One well done is forever done with this great fertilizer. Who ever saw the ruins of a house, where the plastering and mortar is found, but has seen the rich strong grass, at all seasons, wet and dry? What produces this?—The fertility that gathers to the residence of man cannot thus last. Can it be any other than the lime in the mortar? Lime acts more decisively upon some soils than upon others, but limestone land is ever fertile wherever found, and where it is deficient, if we add it, it will remain. It seems to act in the manures as a kind of condiment, preparing them for the appetites of the plants. A small portion of lime or alkaline matter is found in all vegetables, grasses and trees; lime supplies this, and hence the vigorous growth wherever it is found. It is much more advantageous to double the produce of one acre, than to work two acres for the same return. Let us try this article. If we see no marked advantage the first year, and but little the second, doubt not: for it requires time to get this material fairly under way. But when it does act, its operation is steady and durable, and annually returns the cost of the application.—*Farmer's Monthly Visitor.*

REMEDY FOR WHOOPING COUGH.—The Tennessee State Agriculturist says:—Take three cents worth of liquorice, three of rock candy, three of gum arabic, put them in a pan of water, simmer them till nearly dissolved, then add three cents worth of paragoric and a like quantity of antimonial wine. Let it cool and sip whenever the cough is troublesome, and the cure is said to be certain.

APPETITE—A relish bestowed upon the poorer classes, that they may like what they eat, while it is seldom enjoyed by the rich, because they may eat what they like.

AUGUSTA MARKET.

TUESDAY P. M., May 2.

Cotton.—Since our report of last Tuesday, the market has been very active, and the advance prices of the week ending 25th ult., have been fully sustained, if not improved upon. We now quote 5 to 7 cents as extremes of the market—principal sales 5½ to 6½ cents; remarking that the market closes firm with a good demand.

Exchange.—There is no change in the rate of Exchange, which continues at par. Central Bank bills range from 25 to 27 ℔ cent discount. Alabama 18 to 20 ℔ cent discount. State 6 ℔ cent Bonds 50 to 51½.

CONTENTS OF THIS NUMBER.

	PAGE.
Mr. Foote's Prize Essay, continued	65
Consumption of Cotton; the Cotton Trade; Book Farming; Salt a Manure for Wheat; Six Reasons for Planting an Orchard	67
Reformation, or Bankruptcy among Planters in the Cotton States; to Farmer's Daughters	68
Treatment of Cows; Milking; Night Soil	69
Comparative Nourishment of different kinds of Vegetables; Comparative value of different kinds of Food for Cattle; Exercise	70
Splendid Berkshires; Cotton Seed for Cows; Curing Sweet Potatoes; Soap Making	71
Premium Corn in New York; How to cook Potatoes; Description of the person of Jesus Christ; Lime; Remedy for Whooping Cough; Augusta Market	72

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SOUTHERN CULTIVATOR.

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MR. FOOTE'S PRIZE ESSAY.

[Continued from page 66.]

A FUNDAMENTAL PRINCIPLE.

What has now been advanced will make apparent, if the writer has not failed of his object, the importance of what he deems a very fundamental principle in the application of manures, viz: that not only in the quantity and kind, but in the mode of their application also, *manures should always be adapted to the peculiar character and condition of the soil.* This general principle, in its relation to the nutritive manures, may be reduced, by way of detail, to a number of highly practical rules, the most important of which are the following:

RULES FOR THE APPLICATION OF MANURES.

1. The smaller the quantity of organic matter in the soil, the greater should be the quantity of manure applied, and vice versa.

A light dressing of manure on an exhausted soil, and a heavy one on a soil already stored with nutritive matter, would be alike injudicious: the former being insufficient, not only to give a permanent fertility to the soil, but even to make the present crop a remunerating one, and the latter having no immediate office to perform—the crop to which it is given being already supplied with appropriate food.

2. The heavier, moister and colder the soil, the lighter, drier and warmer should be the manures applied; as horse and sheep dung in an unfermented state.

"Animal manures develope more or less heat, according to their nature and their state of fermentation; those which have not been decomposed excite more heat and maintain it for a longer time than others. The excrements of the horse and sheep are more heating in their action than those of the cow; the black or brown manures warm the soil more than marl or chalk." Chaptal, p. 37.

3. The lighter, drier and warmer the soil the heavier, moister and less heating may be the manures. The liability of light soils to suffer from drought, should lead the farmer, not only to exercise great care in selecting the most suitable manures, but to see that they are thoroughly incorporated with the soil, and not left in masses to increase the evil. Moderate quantities of either animal or vegetable matter, if properly blended with the soil, will promote its moisture, by increasing its power of absorption; but if applied in excess, or left in considerable masses, the opposite effect will be produced.—The same considerations should have their weight in relation to the kind and quantity of manure used (if any) in the hill, for hoed crops.

4. The more porous the soil, having a loose subsoil, the nearer the surface should the manures be deposited, to avoid infiltration.

We must beware, however, that while we draw one foot from the water, we do not thrust the other in the fire. If, on one hand, by placing our manures too deep in the soil, we suffer loss from infiltration, so, on the other, by leaving them upon the surface, we shall find ourselves losers by evaporation, though, perhaps to a less extent. The true practice would be to give them just that covering, which, while it would protect them from the more direct action of the atmosphere, would at the same time keep them longest within reach of the roots of the plants.

5. The more impervious the soil, having a compact subsoil, the deeper and more intimately should the manures be incorporated, to promote the freer action of the sun and air upon the soil, to render it easier of cultivation, to secure a wider range for the roots of the plants, and to prevent excessive moisture in wet, and drought in dry weather.

The common air, which is to a great extent excluded from soils of the kind now under consideration, exerts a most powerful agency in promoting vegetation, and that in various ways: 1. By imparting to the soil the temperature of the atmosphere; 2d. By furnishing nutritive principles from the decomposition of its own constituents; 3d. By serving as a medium for the introduction into the organs of plants their appropriate aliments; and 4th. By conveying to the roots of the plants, the various fertilizing matters contained in the dews which it deposites on the surface of the earth. Says Chaptal, (p. 33,) "That earth which is most easily affected by the dews, yields most readily to the action of the roots, whether it be to fix the plants firmly by their extension, or to draw from the soil its nutritive properties."

6. On soils disproportionately silicious, or calcareous, manures should be applied in combination with clay, or argillaceous loam, to increase the retentiveness of the soil, by giving it a stronger texture.

The presence of a certain degree of moisture which is not always possessed by soils of this description, is necessary, 1. To excite, by the oxygen which it contains, the vital energies of the plant; 2. By its solvent properties to aid in decomposing the vegetable matters in the soil, and 3. To dilute, to the requisite degree, the food thus prepared for the plants, and help convey it to their delicate organs. "It is generally considered," says Johnston, (Agricultural Chemistry, p. 78,) "that solid substances of every kind are unfit for being taken up by the organs of plants, and that only such as are in the liquid or gaseous state, can be absorbed by the minute vessels of which the cellular substances of the roots and leaves of the plants are composed.

7. On soils disproportionately argillaceous, manures should be applied in combination with silicious or calcareous matter, to increase its permeability and thus make it more friable, raise its temperature, and secure to a greater degree the beneficial influence of the atmosphere.

To be convinced of the importance of permeability, or looseness of texture to the soil, we need but reflect for a moment that plants are not permitted, like animals, to roam abroad in quest of their food, the invariable limits of their pasturage being the extremes of their roots. How obviously necessary then, that they should be enabled to extend their roots with the utmost freedom, and lay under contribution, without impediment, whatever elements can yield them subsistence.

8. On positively wet soil the application of manure should, in every case, be preceded by thorough draining.

"Whatever writer is converted into steam, the ascending vapor carries off much heat along with it. Let two adjoining fields be wet or moist in different degrees, that which is wettest will almost at all times give off the largest quantity of vapor, and will therefore be the coldest. What is the remedy? A removal of the excess of water? And how? By effectual draining. The first effect upon the soil is the same as if you were to place it in a warmer climate, and under a milder sky, where it could bring to maturity other fruits and yield more certain crops." Johnston, p. 54.

"If the water is withdrawn from a marsh, free access is given to the air, and the marsh becomes a fruitful meadow." Liebig, p. 116.

To the elevation of the temperature of cold, wet soils, too much importance can hardly be attached. "The solvent power of water over solid substances, is increased by an elevation of temperature. To this fact is ascribed, among other causes, the peculiar character of the vegetable products, as their extraordinary luxuriance, in tropical countries. Johnston, p. 48.

"Warmth renders the sap fluid, and quickens its circulation; cold thickens it and renders it stagnant. It is heat alone, that by animating the vegetable organs, enables the plant to elaborate within itself the nourishment which it receives." Chaptal, p. 36 and 102.

ADDITIONAL RULES.

The relation of manure to the *roots* of plants and the peculiar *action* of manures on different plants and on different classes of crops, give rise to the following additional rules.

9. The deeper the roots of any plant penetrate the earth, the deeper should the manures be deposited; and the more superficial the roots of any plant, the nearer the surface should they be lodged.

The *mouths* of plants being uniformly placed at the extremes of their roots, the necessity is obvious, that in order to derive from them the benefits intended, the substances employed as manure should be distributed in the soil, with some regard, at least, to the extension and position of these roots. That system which should lead the farmer to prepare in the same manner a patch of ground for strawberry plants, whose creeping roots scarce penetrate beneath the surface, and another for parsnips, which have been known to strike their roots to the perpendicular depth of six feet, would be indeed ridiculous.

10. The quantity and quality of manure should be carefully adapted to the character of the plant cultivated, as being a great or small consumer, and as having a special partiality for a particular constitution of soil, or for a particular kind of nutritive principles.

Some species of plants, as Indian corn, for instance, are well known to demand a supply of food which would surfeit and destroy the more delicate grains; some thrive luxuriantly in cold and wet, and others in warm and dry soils, to which an exchange of locality would prove fatal; and some, again, evince a natural appetite for the rank exhalations of fermenting manures, as those, in general, which have long tap roots, and large, fleshy stalks, while others prefer ammonia, as red and white clover; others lime, as potatoes and wheat; others common salt, as the asparagus plant, &c.

11. Whenever manure is furnished to the soil, the quantity applied should be amply sufficient to secure the fullest developement, and most vigorous growth of the plants intended to be cultivated.

It is a most interesting and important discovery of modern science, that plants, through the agency of their leaves, derive no small propor-

BOMMER'S MANURE.

The claims of Mr. George Bommer to the discovery of a process, by which masses of vegetable and other matter can be readily and cheaply converted into manure of the most fertilizing qualities, has attracted much attention in the agricultural world, for the last twelve months. We were disposed at first to ridicule it, as one of the numerous humbugs of the day; we never doubted the value, if we could have been assured of the authenticity, of the discovery. When, therefore, we were at the North last fall, and heard Mr. Bommer spoken of as a scientific gentleman, and any thing but the charlatan we had imagined him to be, we were induced to inquire farther into a subject which was likely to prove so interesting to our readers. We met with many who had purchased the right, and who anticipated the most beneficial results, but with none who had had an opportunity of reducing the experiment to practice.—After our return, attracted by various favorable notices in the northorn papers, we were requested frequently by our subscribers to ascertain the particulars of method, price, &c. Accordingly, we opened a correspondence with Mr. Bommer, the result of which is, that he has appointed us his agents for the State of Virginia, and we are now prepared to dispose of the right of using this invention, with full and particular directions, upon the terms indicated below.

Manure is the farmer's sheet anchor, and he who affords facilities, whereby its production may be increased, is certainly in a fair way to rival him "who caused two blades of grass to grow where only one grew before." But the increase of quantity is not all; the capability of getting up a pile of manure in a few days, just where it is wanted, presents advantages almost incalculable in its consequences. The foreign substances (by which we mean those that the farmer would have to purchase,) necessary to convert one thousand of straw into four thousand of manure, will not cost more than fifty cents.

We make the following extract from Mr. Bommer's statement with respect to his invention:—

"This invention is the fruit of many years of exertion and chemical labor, and the result of repeated and various experiments.

The secret of the invention to make the manure, is accurately described and specified in my method secured by patent. The preparation of said manure is very simple and easy, and every farmer, by following my method, can exactly count upon certain success.

We may, therefore, abandon for the future, the partial use and application of every kind of merely stimulating manure, such as lime, plaster of Paris, ashes, &c.

The merit of my method essentially consists in the following important points:

1. In being able to reduce in a short time all kinds of straw and ligneous weeds to a rich, unctuous and durable manure, such as wheat straw, barley, rye, buckwheat and other black grains; stalks of Indian corn, rice and other plants; dried or green potato tops, tops, leaves, stalks and roots of all kinds of plants; green or dried seeds, green rushes, sea weeds, sea rushes, heather broom, stubble, in fact, every thing belonging to the vegetable kingdom, and a great many other things lying about farms which are often allowed to go to waste. Even the ground itself may be converted into the best manure or compost.

2. In the combination or alliance of fecundating substances, the use of which when separated, would not and could not produce the desired effect.

3. In the production of a very considerable quantity of factious water, which, when combined with other ingredients, forming lees, furnishes the farmer with a fertilizing liquid, the commixture of which in either vegetable or mineral substances, gives a manure of the richest kind.

4. In the production of a quantity of nitrate of lime and caustic potash; of ammonia and saltpetre—four substances which modern chemistry has found to contain the most fecundating properties possible.

N. B. Nitrate of lime and caustic potash are formed by the mixture of ingredients composing the leese, as chemical analysis will easily demonstrate. Ammonia and saltpetre are produced by the lees combined with hydrogen and azote thrown off by the high fermentation of the mass. The existence of the first is made known to the senses by the strong smell of ammonia when the heap is opened.

From all this it is clear that my method, employed on farms, offers the following advantages:—

1. That those who have straw will be able to change the same into manure immediately after the crop is housed, or at any required time.—Those who have not straw may use any green or dry substance instead; and that those who have neither straw nor the substance above mentioned, may change the very soil itself into a very good earth manure, and in any spot they may choose.

2. That a farmer can make with the greatest ease, in a few days, earth manure, or compost, which will answer all the purposes of animal manure, and excel in their fecundating properties all other ordinary composts, which by other means can be had hardly in one year, more frequently only in three years. That this earth manure may be used in the spring to quicken the growth of seed that has suffered from the rigors of the winter; to manure wheat previously sown without manure; it will be a great benefit in planting Indian corn; for top dressing of artificial and other meadows; it is of the greatest use in gardens, mulberry and other fruit trees, keeping at once the ground moist and producing rapid vegetation.

3. That the farmer will have the advantage of being able to make his manure heaps when, where and as he pleases; he will be able to open them when they are in heat without losing any of the fecundating moisture.

4. By means of the lees, which this method will inform him how to make, it will be easy for him to give to his farm yard manure more invigorating properties, and he may increase its bulk at pleasure. Farm yard manure, in fact should be used only as the leaven to make the different heaps required.

5. By the great quantity of moisture entering into the materials, the weight of such of them as are dry, will be increased fourfold; that of the others is more than doubled.

6. This method enables the farmer to control entirely his manure heaps; that is to say, he will be able to make them in all their parts equally good and fertilizing. The lees, which distribute the saline and soluble particles in a regular and uniform manner, will produce an even crop throughout the field.

7. By the high degree of heat to which in that course of making it attains, the germinating power of all weeds found in the materials thus submitted to decomposition will be utterly destroyed. Hence manure made after after this method never re-produces weeds.

8. The farmer will also be able to graduate his manure. He may have it of any degree of strength he wishes. This will enable him to forward the growth of plants in a manner hitherto unknown.

9. By means of manure thus graduated at will, market gardeners will have their produce much earlier in the market than heretofore.—They will be able also to heat their hot-beds anew by means of the lees without disturbing the frames.

10. In fine, the leese by which the manure is made, are prepared cold and without any previous chemical preparation; the majority of the ingredients may be found at hand on almost every farm, and cost nothing; and water, which is the basis of the system, is of no more expense. All here concur to render the method truly economical. Such are the principal grounds on which the system is recommended.

My method rests solely upon facts which are the results of numerous experiments. I have explained it in simple terms, without making use of any technical expressions; it is as easy to understand as to put in practice. Thus clearly and simply detailed, I present it to the public, having proved, by repeated public experiments in presence of enlightened farmers, that all I have said is true, and that the advantages to be derived from its adoption are real and not visionary.

To conclude—as this method is my property, secured to me by patent, I hereby give notice, that the pamphlets of my "Method," are all signed in my own hand writing, and sealed, and can be obtained only of myself or my agents, authorized for this purpose, and that every method circulated or sold by any other persons, I declare false and counterfeit.

To facilitate the purchase of the Method, the price is fixed at the following exceedingly moderate rates:

For gardens of any extent	$6
For farms, under 200 acres	10
" " from 200 to 400 acres	15
" " over 400 acres	20
" plantations of any extent	25

For this small sum, the method becomes the property of the purchaser, for his own use forever.

The application of this system is very simple, and the process plainly explained in my method; but if any one of the purchasers should meet with any difficulty in its application, or should not realize the results that this method offers, they may apply to me for the instructions necessary in order to a complete success in the operation. If there should be a final failure, which has never yet occurred, the purchase money shall be restored.

GEORGE BOMMER.

The following commendatory notice of this valuable discovery, is from Professor Eli Ives, M. D., one of the Vice Presidents of the United States Agricultural Society:

"I have examined the pamphlet of Mr. Bommer on the subject of manufacturing manure. His method is founded on correct philosophical principles, agreeable to those recently advanced by Liebig. If the farmers can be induced to purchase the right, and thoroughly execute his plan of making manure, in my opinion, it will very much increase the value of their farms.

E. IVES.

The Connecticut Farmers' Gazette for December, published at New Haven, contains the following certificate:

"I hereby certify that, having made repeated trials of Mr. George Bommer's method of making manure by fermentation, and having tested its effects in the rapid decomposition of the mass to which it has been applied, and having also witnessed the influence of the manure made by this process, in promoting the growth of vegetation, I am prepared to regard the invention as an important accession to the farming interest; and, although, having tried other modes of making manure with varied success, I am free to acknowledge that I have never been acquainted with any system of the kind that would compare with this for utility.

ERASTUS DUDLEY.

The editor adds—"We are well acquainted with Mr. Dudley, the author of the above certificate, and we know him to be a man of sterling integrity. He is an intelligent farmer, and not likely to be imposed upon by every *new thing*. Inasmuch as he has tried Mr. Bommer's method, and gives his unqualified testimony in its favor, we have no hesitation in commending his statement to the confidence of the public."

Certificates from intelligent farmers might be greatly multiplied, but we consider them unnecessary.—*Southern Planter.*

WEDNESDAY, MAY 10, 1843.

BACK NUMBERS.—All new subscribers to the "Southern Cultivator" can be supplied with the back numbers.

OUR ISSUE.

Since our commencement, which was two months later than we had at first designed, being the first of March instead of the first of January, we have issued the Cultivator weekly, instead of every two weeks, until we could make up the lost time, so as to have the volume close with the year. Having accomplished our object with the issue of the present number, it will, hereafter, be issued every other Wednesday, in strict accordance with the terms.

We avail ourself of this occasion to repeat our acknowledgments to our numerous friends, for the interest they have manifested in the extension of our circulation, and to re-assure them of our zeal in the enterprise, and now that we have got regularly under way, we hope to be able to render the succeeding numbers more interesting to the readers than those which have preceded.

We hope our friends will continue to give us the result of their experiments in every department, for we should be pleased to have each number well filled with communications.

CORRECTION.—In the article signed "Monticello" in our last, copied from the Columbia (S. C.) Planter, instead of "Kentucky *hemp*-grass," read "Kentucky *blue*-grass."

RECIPE FOR KILLING CATTERPILLARS

"Kill! kill! kill!"—*Shakspeare.*

The following advice to farmers, from the Gospel Banner, is sensible and to the point—The catterpillars may yet be destroyed, and no time should be lost in commencing and completing the work of destruction:

"This is to be a great year for catterpillars on fruit trees. The eggs were deposited on the limbs about the first of July last, when the weather was dry and warm, and afforded the parents a fine time to provide for a numerous progeny the [illegible] next year. If you will examine your apple trees you will find the limbs greatly infested with these eggs. Now is the time to destroy them. Do not leave the buds swell—But how shall this be done? By simple means. Just make a strong ley or soap suds strong enough to bear an egg, and with a common piece of cloth, wash the infested limbs. It will kill every mother's son of an egg, and you will find no catterpillars' beds upon them in May or June. Even without regard to catterpillars it is an excellent plan, every spring, to wash trees with strong soap suds. This will kill various sorts of insects in the egg—it will cleanse and renovate the bark, and promote the health and fruitfulness of the tree. Try it. Be not afraid of injuring the tree, even if the ley is so strong as to blister your hands. It will do no harm if applied before the buds are much swelled; but it will kill the young leaf.

INFLAMMATION IN THE EYE OF THE HORSE, &c.—A correspondent of the Albany Cultivator says: "I had a horse hurt his eye the past winter, and I thought he would lose it; but I have restored it again. For inflammation of the eye, take sassafras twigs of one year's growth; take the inner bark, a handful to a pint of cold water; let it stand for a few hours; it will become thick, like the white of an egg; wash the eye out well; it will remove the inflammation. For a film on the eye, take loaf sugar, pulverize it as fine as possible; take a goose quill and fill it, and blow it in the eye, which will remove it. My horse was entirely blind, and the above cured him, so that he can see as well as ever."

For the Southern Cultivator.

CULTURE OF SWEET POTATOES.

GREEN COUNTY, May 4, 1843.

MESSRS. JONES—I have noticed the plan of raising Sweet Potatoes by Mr. W. McKinley, of Lexington, Ga., published in the Cultivator, whose plan I am fully of the opinion is a good one.

I am, however, of opinion that the old plan of planting in ridges, could be made to produce as many bushels to the acre as the one proposed by Mr. McKinley, and much easier gathered, and I make this communication for the benefit of those who have planted in ridges, which I intend to adopt at the proper time, viz: after my potatoes come up well, I shall plough and hill them up, and then gather rotten straw or leaves from the woods, and fill up the space between the ridges, and put a sufficiency on the ridge to prevent the rays of the sun or wind from drying them. Nothing should show itself but the top of the plant. By this method, the space and the ridges will be kept in a moist and cool condition, and the potato vines will cover the whole surface. By this mode of culture, only one working is necessary, and will add a rich coat of manure for the next crop, and also prevent grass or weeds from springing up.

After I gather my growing crop, I will inform you of the result, and hope others will try it and do the same.

I will however state, that I have planted a few rows on Mr. McKinley's plan, in the same patch, and will fully test the mode of culture.

JOHN ROOT.

PUNCTUALITY.—Method is the very life of business—and there is no method without punctuality. Punctuality produces calmness of mind. A disorderly man is always in a hurry; he has no time to speak to you, because he is going elsewhere, and when he gets there, he is too late for his business; or he must hurry away to another before he can finish it. Punctuality gives weight to character. Such a man has never an appointment, and I know that he will keep it. This conviction secures punctuality to you; for like other virtuous propensities (such as truth, honesty, &c.) it becomes contagious. I owe you punctuality. If I have made an appointment with you, and have no right to throw over your time, it is by my own. Punctuality to engagements, is a saving virtue, and is one of the requisites to the character of a good member of the community.—*Selected.*

CUT WORMS

We annex, says the American Farmer, with feelings of pleasure, the following truly valuable communication from Dr. Samuel D. Martin upon the habits, nature and species of the cut-worms, and from our personal knowledge of the scientific and practical knowledge, the acute observation, and philosophic turn of mind of the writer, we are convinced that the means which he suggests for their destruction, are those the best adapted to that purpose. Farmers and planters, whose lands are infested with the cut worms will do well to bear in mind what the Doctor says upon the subject.

Last spring I collected some cut-worms and put them into a glass jar with a sufficiency of dirt, where I fed them until they rolled themselves up in mud balls. By cut-worms I mean a worm about an inch long of a grey color, that lives under the ground, and come out in the night, and dark cloudy days, and cut off a plant; eats part and then returns to drag the balance into the ground after it. When taken out of the ground he puts his head and tail together and rolls himself into a kidney shape. Those cut-worms, after going into the chrysalis state, produced a grey miller or moth, such as we frequently see about our candles in the summer time, and are called by us candle-flies.

I kept three of these millers in a jar, and they deposited their eggs upon some clover leaves and bloom that I put in the jar. On the 3d of June these eggs hatched little caterpillars or cut-worms. I fed them principally upon young clover leaves. I think there must have been several hundred; I did not count them. When they were nearly grown they became so voracious, and required the jar, which had been only three pints, to be filled so frequently that I killed all but three of them; these went up in mud balls on the 21st of July, came out millers, moths or candle-flies, as you may choose to call them, from the 5th to the 7th of August. Unfortunately all the moths were of one sex, so that I lost the breed: these I call the two-crop cut-worm.

Other cut-worms that I put up at the same time, that is, early in the spring, did not produce moths until the 11th or August: these were not quite as dark colored as the first. These I call the one crop cut-worm. This will reconcile the statements of two writers upon the subject, who have differed about the time the moth makes its appearance, the two crops each appearing at both times. I saw, also, the moth that produced the cut-worm telegraphed above in my clover field in October.

This moth is a night fly, and is rarely seen in the day time, unless forced from its resting places. From the attraction that fire has for this kind of butterfly, (permit me to call the moth a butterfly, in accordance with its common name) it is probable that fires kindled in our fields with brush and straw, of dark nights, will destroy a great number of them. Salt put on [illegible] might also destroy the worm; but the best remedy that I have ever tried is tally-ringing. This, by destroying the vegetation, kills the cut-worm by cutting off its supplies for food, and it also destroys the roots of the grass upon which the young worm would live during the winter. I have put no confidence in and by trying where I have had the ground ploughed in the fall or winter.

This moth that produces the cut-worm is the parent [illegible] of cut-worms. I have made experiments with the eggs you and grub-worm, but never [illegible] moth in the place of these. I will state what I found last year in the [illegible] all the other years and [illegible]—And it has been the case for [illegible] past, that they have done no more damage than any other insect except the [illegible] fly and grasshopper.

The cut-worm [illegible] attacks

ON THE ALTERNATION OF CROPS.

It has long since been found by experience, that the growth of annual plants is rendered imperfect, and their crops of fruit or herbs less abundant, by cultivating them in successive years on the same soil, and that, in spite of the loss of time, a greater quantity of grain is obtained when a field is allowed to lie uncultivated for a year. Durihg this interval of rest, the soil in a great measure, regains its original fertility.

It has been further observed, that certain plants, such as peas, clover, flax, thrive on the same soil only after a lapse of years; while others, such as hemp, tobacco, *helianthus tuberosus*, rye and oats, may be cultivated in close succession when proper manure is used. It has also been found, that several of these plants improve the soil, while others, and these are the most numerous, impoverish or exhaust it. Fallow turneps, cabbage, beets, spelt, summer and winter barley, rye and oats, are considered to belong to the class which impoverish a soil; while by wheat, hops, madder, late turneps, hemp, popies, teasel, flax, weld, and licorice, it is supposed to be entirely exhausted.

The excrements of man and animals have been employed from the earlist times for the purpose of increasing the fertility of soils; and it is completely established by all experience, that they restore certain constituents to the soil, which are removed with the roots, fruit or grain or entire plants grown upon it.

But it has been observed that the crops are not always abundant in proportion to the quantity of manure employed, even although it may have been of the most powerful kind; that the produce of many plants for example, diminishes in spite of the apparent replacement by manure of the substances removed from the soil, when they are cultivuted on the same field for several years in succession.

On the other hand it has been remarked, that a field which has become unfitted for a certain kind of plant, was not on that account unsuited for another; and upon this observation, a system of agriculture has been gradually founded, the principal object of which is to obtain the greatest possible produce with the least expense of manure.

Now it was deduced from all the foregoing facts, that plants require for their growth different constituent of soil, and it was very soon perceived, that an alteration of the plants cultivated maintained the fertility of a soil quite as well as leaving it at rest or fallow. It was evident that all plants must give back to the soil in which they grow different proportions of certain substances, which are capable of being used as food by a succeeding generation.

But agriculture has hitherto never sought aid from chemical principles, based on the knowledge of those substances which plants extract from the soils on which they grow, and of those restored to the soil by means of manure. The discovery of such principles will be the task of a future generation, for what can be expected from the present, which recoils with seeming distrust and aversion from all the means of assistance offered it by chemistry, and which does not understand the art of making a rational application of chemical discoveries? A future generation, however, will derive incalculable advantage from these means of help.

Of all the views which have been adopted regarding the cause of the favorable effects of the alternations of crops, that proposed by M. Decandolle alone deserves to be mentioned as resting on a firm basis.

Decandolle supposes that the roots of plants imbibe soluble matter of every kind from the soil, and thus necessarily absorb a number of substances which are not adapted to the purposes of nutrition, and must subsequently be expelled by the roots, and returned to the soil.—Now, as excrements cannot be assimulated by the plan which ejected them, the more of these matters which the soil contains, the more unfertile must it be for the plants of the same species. The excrementitious matters may, however, still be capable of assimilation by another kind of plant, which would thus remove them from the soil, and render it again fertile for the first. And if the plants last grown also expel substances from their roots, which can be appropriated as food by the former, they will improve the soil in two ways.

Now a great number of facts appear at first sight to give a high degree of probability to this view. Every gardner knows that a fruit tree cannot be made to grow on the same spot where another of the same species has stood; at least not until after a lapse of several years. Before new vine stocks are planted in a vineyard from which the old have been rooted out, other plants are cultivated on the soil for several years. In connexion with this it has been observed, that several plants thrive best when growing beside one another; and on the contrary, that others mutually prevent each other's development.—Whence it was concluded, that the beneficial influence in the former case depended on a mutual interchange of nutriment between the plants, and the injurious one in the latter on a poisonous action of the excrements of each on the other respectively.

A series of experiments by Macaire Princep gave great weight to this theory. He proved beyond all doubt, that many plants are capable of emitting extractive matter from their roots.—He found that the excretions were greater during the night than by day (?), and that the water in which plants of the family of the *Leguminosæ* grew acquired a brown color. Plants of the same species placed in water impregnated with these excrements, were impeded in their growth, and faded prematurely, while, on the contrary, corn plants grew vigorously in it; and the color of the water diminished sensibly; so it appeared that a certan quantity of the excrements of the *Leguminosæ* had already been absorbed by the corn plants. These experiments afforded, as their main result, that the characters and properties of the excrements of different species of plants are different from one another, and that some plants expel excrementitious matter of an acrid and resinous character; others mild substances resembling gum. The former of these, according to Macaire Princep, may be regarded as poisonous, the latter as nutritious.

The experiments of Macaire Princep afford positive proof that the roots, probably of all plants, expel matters, which cannot be converted in their organism either into woody fibre, starch, vegetable albumen, or gluten, since their expulsion indicates that they are quite unfitted for this purpose. But they cannot be considered as a confirmation of the theory of Decandolle, for they leave it quite undecided whether the substances were extracted from the soil, or formed by the plant itself from food received from another source. It is certain that the gummy and resinous excrements observed by Macaire Princep, could not have been contained in the soil; and as we know that the carbon of a soil is not diminished by culture, but on the contrary increased, we must conclude that all elements which contain carbon must be formed from the food obtained by the plants from the atmosphere. Now, these excrements are compounds, produced in consequence of the transformations of the food, and of the new forms which it assumes by entering into the composition of the various organs.

M. Decandolle's theory is properly a modification of an earlier hypothesis, which supposed that the roots of different plants extracted different nutritive substances from the soil, each plant selecting that which was exactly suited for its assimilation. According to this hypothesis, the matters incapable of assimilation are not extracted from the soil, while M. Decandolle considers that *they are returned* to it in the form of excrements. Both views explain how it happens, that after corn, corn cannot be raised to advantage, nor after peas, peas; but they do not explain how a field is improved by lying fallow, and this is in proportion to the care with which it is tilled and kept free from weeds; nor do they show how a soil gains carbonaceous matter by the cultivation of certain plants, such as lucerne and sainfoin.

Theoretical considerations on the process of nutrition, as well as the experience of all agriculturists, so beautifully illustrated by the experiments of Macaire Princep, leave no doubt that substances are excreted from the roots of plants, and that these matters form the means by which the carbon received from humus in the early period of their growth, is restored to the soil. But we may now inquire whether these excrements, in the state in which they are expelled, are capable of being employed as food by other plants.

The excrements of a carnivorous animal contain no constituent fitted for the nourishment of another of the same species; but it is possible that an herbivorous animal, a fish or a fowl might find in them undigested matters capable of being digested in their organism, from the very circumstance of their organs of digestion having a different structure. This is the only sense in which we can conceive that the excrements of one animal could yield matter adapted for the nutrition of another.

A number of substances contained in the food of animals, pass through their alimentary organs without change, and are expelled from the system; these are excrements, but not excretions. Now, a part of such excrementitious matter might be assimilated in passing through the digestive apparatus of another animal.—The organs of secretion form combinations, of which only the elements were contained in the food. The production of these new compounds is a consequence of the changes which the food undergoes in becoming chile and chyme, and of the further transformations to which these are subjected by entering into the composition of the organism. These matters, likewise, are eliminated in the excrements, which must therefore consist of two different kinds of substances, namely, of the indigestible constituents of the food, and of the new compounds formed by the vital process. The latter substances have been produced in consequence of the formation of fat, muscular fibre, cerebral and nervous substance, and are quite incapable of being converted into the same substances in any other animal organism.

Exactly similar conditions must subsist in the vital processes of plants. When substances, which are incapable of being employed in the nutrition of a plant, exist in the matter absorbed by its roots, they must be again returned to the soil. Such excrements might be serviceable, and even indispensable, to the existence of several other plants. But substances that are formed in a vegetable organism during the process of nutrition, which are produced, therefore, in consequence of the formation of woody fibre, starch, albumen, gum, acids, &c., cannot again serve in any other plants to form the same constituents of vegetables.

The consideration of these facts, enables us to distinguish the difference between the views of Decandolle and those of Macaire Princep. The substances which the former physiologist viewed as excrements, belonged to the soil; they were undigested matters, which although not adapted for the nutrition of one plant, might yet be indispensable to another. Those matters on the contrary, designated as excrements by Macaire Princep, could only in one form serve for the nutrition of vegetables. It is scarcely necessary to remark, that this excrementitious matter must undergo a change before another season. During autumn and winter, it begins to suffer a change from the influence of air and water; its putrefaction, and at length, by continued contact with the air, which tillage is the means of procuring, its decay are effected; and at the commencement of spring it has become converted, either in whole or in part, into a substance which supplies the place of humus, by being a constant source of carbonic acid.

The quickness with which this decay of the

excrements of plants proceeds, depends on the composition of the soil, and on its greater or less porosity. It will take place very quickly in a calcareous soil: for the power of organic excrements to attract oxygen and to putrefy is increased by contact with the alkaline constituents, and by the general porous nature of such kinds of soil, which freely permit the access of air. But it requires a longer time in heavy soils consisting of loam or clay.

The same plants can be cultivated with advantage on one soil after the second year, but in others, not until the fifth or ninth, merely on account of the change and destruction of the excrements, which have an injurious influence on the plants, being completed in the one in the second year; in the others, not until the ninth.

In some neighborhoods clover will not thrive till the sixth year, in others, not till the twelfth; flax in the second or third year. All this depends on the chemical nature of the soil, for it has been found by experience, that in those districts where the intervals at which the same plants can be cultivated with advantage are very long, the time cannot be shortened even by the use of the most powerful manures. The destruction of the peculiar excrements of one crop must have taken place before a new crop can be produced.

Flax, peas, clover and even potatoes, are plants, the excrements of which, in argillaceous soils, require the longer time for their conversion into humus; but it is evident that the use of alkalies and burnt lime, or even small quantities of ashes which have not been lixiviated, must enable a soil to permit the cultivation of the same plants in a much shorter time.

A soil lying fallow owes its earlier fertility, in part, to the destruction or convertion into humus of the excrements contained in it, which is effected during the fallow season, at the same time that the land is exposed to a further disintegration.

In the soils in the neighborhood of the Rhine and Nile, which contain much potash, and where crops can be obtained in close succession from the same field, the fallowing of the land is superseded by the inundation; the irrigation of meadows effects the same purpose. It is because the water of the rivers and streams contain oxygen in solution that it effects the most complete and rapid putrefaction of the excrements contained in the soil which it penetrates, and in which it is continually renewed. If it was the water alone which produced this effect, marshy meadows should be most fertile. Hence it is not sufficient in irrigating meadows to convert them into marshes, by covering, for several months, their surface with water, which is not renewed; for the advantage of irrigation consists principally in supplying oxygen to the roots of plants. The quantity of water necessary for this purpose, is very small, so that it is sufficient to cover the meadow with a very thin layer, if this be frequently renewed.—*Liebig.*

FAITH AND WORKS.—There is no pursuit in life in which the union of faith and works is more necessary, or productive of better effect, than in that of farming. This is well illustrated by the following little story, which we have somewhere heard or read. At the early settlement of New Hampshire, the inhabitants of a town in the interior consisted chiefly of Irish or Scotch Presbyterians, who among other things adopted the following custom. When their fields were planted and sown, the minister, with his elders, deacons and the farmers, visited each field in succession, offering up a short prayer at each, that their labors might result in a plentiful harvest. One day the procession engaged in this pious perambulation arrived at a field, where the minister stopped, took a quick but keen survey, and then addressed his flock to this purport: "My friends and brethren, we may pass along; it will be of no use to pray over this field, till there is more manure spread upon it; otherwise, even the prayer of a righteous man, however *fervent*, cannot be *effectual.—Alb. Cult.*

SALT IN AGRICULTURE.

Every farmer knows the beneficial effects of common salt, (Muriate of Soda,) in certain departments of agricultural economy. But the fact that so small quantities are used, is proof abundant, that ALL its good effects are not thoroughly understood And were they known and acknowledged, there would a question arise whether a full and general use of it would warrant the expense which its present prices necessarily involves.

We give our readers a few extracts on the benefit of salt in farming, from a work on that subject, published by C. W. Johnson, England.

Mr. Johnson speaks first of the farmers of Padstow Harbor, who annually bring 50,000 single horse cart loads of sea sand a distance of four or five miles, and spread it upon their land for the benefit the salt gives it.

In speaking of its benefits to wheat, he says: "Salt rarely causes the wheat plants to grow larger or taller, but fills up the ear better, and brings the feeble plant forward.

Sinclair says, "Salt appears to lessen the produce of straw and increase the weight of grain. Johnson recommends that salt be spread over the land some time before sowing, in quantities of not less than ten bushels or more than twenty bushels to the acre. He gives the following result of an experiment tried on light, gravelly soil.

No. 1. Soil without any manure for four years, gave 13 bushels, 26 lbs. per acre.

No. 2. Soil manured with stable dung to the previous crop, potatoes 26 bushels, 52 lbs. per acre.

No. 3. Soil with five bushels of salt per acre, and no other manure for four years, 26 bushels, 12 lbs. per acre.

An Essex (Eng.) farmer, Mr. Baynes, had his doubts of the value of salt removed by the following result; sandy, dry soil. Produce in bushels per acre:

Soil dressed with 15 loads of stable dung per acre, 17½ bushels.

Soil dressed with 14 bushels of salt per acre, immediately after the seed was sown, 36½ bush.

Mr. Johnson recommends the application of salt as a remedy for smut, blight and mildew, by the following process. Take one pound of salt to a gallon of water and throw it over the plants with a brush.

For barley, Mr. Ransome of Suffolk county, gives the following result:

Soil without any manure, 30 bushels per acre.

Soil dressed with 16 bushels of salt per acre, in March, gave 51 bushels per acre. A light sandy soil.

Turneps, Mangel, Wertzel, &c.—An experiment is reported by Sir Thomas Ackand of Devonshire, and another from Mr. Hares of Buckinghamshire, which though not so specific in results, are commendatory of it for these crops, if the soil is light and sandy. In clayey soils they found no good benefit.

Mr. Johnson recommends the application "of from ten to twenty bushels of salt to the acre for potatoes, to be spread on the surface as soon as the potatoes are planted, or ten bushels the previous fall and ten after planting."

He gives the following results of experiments with potatoes, on a light, gravelly soil. Produce in bushels per acre.

No. 1. Soil without any manure, 120.

2. Soil manured with twenty bushels of salt the previous September, 192.

3. Soil manured with stable dung at the time of planting, 218.

4. Soil manured with stable dung and 20 bushels of salt, 234.

5. Soil manured with 40 bushels of salt alone, 20th September previous, and 20 immediately after planting, 192½.

6. Soil manured with 40 bushels of salt, as in last experiment, and also with stable dung, 244.

Rev. E. Cartwright of Tunbridge, gives a similar result to his experiments, and says, "of ten different manures, most of which are of known and acknowledged efficacy, salt, with one exception, is superior to them all. In speaking upon its efficacy upon live stock, he quotes Mr. Curwen, M. P. of Cumberland, who deals it out in the following measure:

For Horses	6	ounces per day.
Milch Cows	4	" "
Feeding Oxen	6	" "
Yearling	3	" "
Calves	1	" "
Sheep	2 to 4	" per week.

"If kept on dry pasture or fed on turneps, give it without stint. It is supposed that if sheep have a regular supply of it, they will never be affected by the rot. Mr. Butcher for years employed salt for his cattle and sheep, on his farm in Norfolk. One of his fields was so unfavorable to sheep before he used salt, that he lost ten or twelve in a night, when feeding on the turneps, but after he adopted salt he never lost one. He gave his sheep salt without stint; but remarked that they always used *four times* the salt on this particular field, than when on any other on the farm. This field was one year rented to a neighbor who did not use salt. After losing ten sheep the first night, the tenant gave up the field in despair."

On a garden of sandy soil, owned by Mr. George Johnson, the following experiments were tried, with the results attached.

Windson Beans.—Produce in bushels per acre:

1. Soil without any manure, 135½.
2. Soil dressed with 20 bushels of salt per acre, week before seed time, 217.

Onions.—Produce per acre:

1. Soil manured with 20 bushels of salt and 10 tons of farmyard manure,

	Tons.	cwt.	qrs.	lbs.
	3	12	3	12
2. Soil manured with 12 tons of farm yard manure	2	10	2	19

Carrots.—Produce per acre:

1. Soil manured with 20 bushels of salt and 20 tons of manure	23	6	1	18
2. Soil 20 tons of manure only	22	18	0	26
3. Soil manured with 20 bushels of salt only	18	2	0	00
4. Soil without manure	13	4	0	00

Parsnips.—Produce per acre:

1. Yard manure, 20, salt twenty bushels	6	15	0	00
2. Yard manure, 20 tons	5	11	0	00

Early Potatoes.—Soil without any manure, 308 bushels.

Soil manured with 27 bushels of salt per acre, 584 bushels.

In conclusion, Mr. Johnson says, "if I wished to improve a soil of what is termed an old, worn-out garden, exhausted by fifty years cropping or more, I would give it (½ or a ¼ part at a time,) a good dressing of lime in the autumn, spreading it as soon as it is slacked, and forking it immediately. I would a week or two after that, dig and trench it well in the rough, and lay it up for the frost to act upon; and then in the spring, I would give it a good dressing of salt, (not less than six bushels to the acre.) The good effect of such a treatment would be manifest for two or three years after."

Let the American farmer remember, that we give the above sketches as the experimental results of an English cultivator, and in no way responsible for the success thereof attending, as in all cases sure in our climate, still we have no doubt, indeed we *know*, from actual experiment, that its value in agriculture is very great here, more, to be sure, on some soils and with some crops than with others. Thus, with wheat, we believe it highly valuable, while with corn, we should think it worse than nothing. For flax it has a good effect, also for tubeous and bulbous plants. How much further its use extends, we are not prepared to say, but doubt not that for our grasses, fruit orchards and gardens, it would, under a favorable state of things, be highly beneficial.—*Berkshire Farmer.*

tion of their elementary substances from the atmosphere; and that this proportion is graduated, to a greater or less extent, by the quantity, strength and vigor of their foliage. "Hence, the proportion of organic matter derived from the air, in any crop we reap, must always be the greater, the more rapid its general vegetation has been."

In illustration of the extent to which the atmosphere is drawn upon by plants for their nourishment, as well as the agency which manures exert in the operation, "Sprengel states, that it has been very frequently observed in Holstein, that if, on an extent of level ground sown with corn, some parts of a field marled, and others left unmarled, the corn on the latter portions grow less luxuriantly and will yield a poorer crop than if the whole had been unmarled."—Ib.

12. Unfermented manures should be appropriated, in general, to the use of hoed crops, fermented manures and composts alone, to the finer grains and grasses.

The reasons for this rule (which have been, in a measure, already anticipated,) are, that while Indian corn, potatoes and most tap root plants are benefitted, in the highest degree, by the powerful gases thrown off from manures undergoing fermentation, their effect upon the finer grains is, to hasten unduly the growth of the straw, and thus to expose the crop to the very serious evils of lodging, blasting, &c. "The plant," in this case, "absorbs more nourishment than it can readily digest, and becomes affected by a kind of obesity; the texture of its organs is rendered soft, loose and spongy, and unable to give their products the due degree of consistency." Chaptal, p. 76.

FERMENTATION OF MANURES.

That manure should never be suffered to undergo fermentation any where else than *in the soil*, or in well protected compost beds, may be argued from the facts, 1st. That even an incipient fermentation cannot take place without the evolution and escape of some of its volatile products, such as carbonic acid and ammonia, to the latter of which all nutrative manures are indebted for their principal efficacy; 2. That during fermentation (in the open air,) it is constantly exposed to further loss by infiltration and drainage; and 3. That the finer grains do not require this process to be undergone in the barn yard, since, coming as they mostly do, and as perhaps they always should, after hoed crops, they find the manure employed for the previous crop in just the requisite state of decomposition; a clear gain of the entire advantage secured in the previous harvest.

It may be objected to this view of the subject, that fermented manure is in particular cases indispensible for forcing vegetation—i. e. for hastening the growth and maturity of certain plants. Let this be admitted: still the admission does not establish the necessity of that waste against which we are protesting. Let the manure fermented, be carefully collected in compost heaps and we are satisfied.

APPLYING MANURES TO THE SURFACE.

Whether putrescent manures should ever be applied to the surface of the soil, is a question on which the opinions of distinguished agriculturists are far from being unanimous. The right decision of the question depends, in our view, upon the following circumstances:

1. The condition of the manure to be applied;

2. The character of the soil for which it is intended;

3. The nature of the crop to be benefitted by it; and

4. The time of the year when the manure is to be carried out.

1. If the manure to be applied has been composted, or if the process of fermentation has already spent its force upon it, there can be no serious objection to its being spread upon the surface; since the gaseous exhalations having already escaped, it is chiefly secured from the ravages of the atmosphere, and from infiltration, there is nothing to fear, as that is the very process best adapted to bring the decomposed particles in contact with the mouth of the plants which are to feed upon it.

2. If the soil for which the manure is intended be very porous to a considerable depth, the nearer the surface it can be deposited, without too much exposure to the atmosphere, the better, it being evident that the nutrative juices will soon descend beyond the reach of the plants, if it be in the first place buried too deep.

3. If the crops to be benefited consist of any of the finer grains or grasses, the application of the manure to the surface (harrowed in, in the case of grain,) will have a greater present effect than any other mode of application, as the roots, i. e. the mouths of the plants, lying close to the surface, will have the readier access to their food. That natural meadow land can thus be made to yield a greater burden of grass than by any other means, scarcely admit of a doubt.

4. If the manure to be applied is summer made manure, which must be carted out in the fall, this mode of application will have another argument in its favor. By being spread at this season of the year, after the heats of summer are past, the fermentation and evaporation will be but slight, and the rains and snows which may be expected to fall upon it in succeeding months will either wash it into the soil, or so imbed it among the roots of the growing crop, as quite effectually to shield it from the wasting action of the atmosphere the succeeding season.

One thought more upon this subject. With the relations of plants to the atmosphere as a source of nutriment, we are as yet much less acquainted than with those which they sustain to the soil; and agricultural science, in its onward progress may yet develope the fact, that manures applied to the surface, by exerting a direct and powerful agency upon the leaves of plants, and thus promoting an increased absorption of the nutritive particles of the atmosphere, may prove more beneficial, especially in the case of grasses and the finer grains, notwithstanding the losses they sustain from evaporation, than they would if buried beneath any portion of the soil.

GREEN CROPS FOR MANURE.

Green crops, ploughed under for the purpose of enriching the soil, have been regarded from very ancient times, as valuable aids in agriculture, and are still recommended in no small degree, by the highest agricultural authorities. It is indeed unquestionable, that a crop of clover, for instance, turned under the soil, will afford a sufficient quantity of nutriment for a crop of wheat or rye, and also leave the soil (if not cross-ploughed) in a condition highly favorable to the growth of such a crop. The great question is, whether it would not be more advantageous to the farmer first to give his cattle the benefit of the clover, and then turn under the remaining vegetable, together with the animal matter distributed over the soil, and thus secure two valuable objects instead of one. That such was the opinion of the late Judge Buel, (a more judicious adviser than whom has never contributed to the improvement of American farming,) will appear from his Cultivator, Vol. 2, p. 13 Vegetable matter when thus covered by the soil in its green and succulent state, readily undergoes decomposition, and forms a very enriching substance. The practice, however, is chiefly suited to the warmer countries where vegetation is rapid, and even there it argues a somewhat low state of the art, and is not the best way of producing decomposing matter.—When we are able to raise green food of any kind, it is better that we apply it in the first place to the feeding of animals, for then it not only yields manure, but performs another and not less useful purpose.

It is a consideration, notwithstanding, of some weight, that in case of feeding off the green crop, the nutritive substances lose somewhat by exposure and are much less evenly distributed over the soil for the cultivated crop. "When, however," continues the judge, "the practice is for any reason adopted, the period at which the plants should be ploughed down, is just when they are coming in flower, for they then contain the greatest quantity of readily soluble matter, and have the least exhausted the nutritive substance of the soil."

In the concluding clause of the extract last quoted, green crops are spoken of as "exhausting the nutritive substance of the soil." We take the occasion from this hint to raise an interesting inquiry. If the green crop, while growing above ground, *exhausts* the soil, and this must be admitted, how can it, by turning under, *enrich* the soil? Can it *give* to the soil anything which it has not first *taken away* from it? Science answers in the affirmative. By the aid of her light it has been discovered that plants derive a greater or less proportion of their constituent principles from the *atmosphere*. These principles, by the process of turning under green crops, become a constituent portion of the *soil*. This, then, is one of the secrets of their utility. It is not however the only one.—The *physical* condition of the soil is also improved by their means; its lightness, warmth and *power of absorption* are increased, so that still further draughts are made upon the atmosphere and thus the soil is permanently benefited.

Whether the crop "should be ploughed down just when coming in flower," or not till after maturity, is yet a question of debate, says Dr. Dana, p. 214. Powerful as are the effects of green crops ploughed in, it is the experience of some practical men, that one crop allowed to perfect itself and die where it grew and then turned in dry, is superior to three turned in green. The whole result is explained by the fact that dry plants give more gains than green Green plants ferment—dry plants decay. A large portion escapes in fermentation as gas, and more volatile products are formed than during decay."

The testimony of Chaptal hangs quite on the other end of the beam. "It is well known to the farmer," he remarks, "that ploughing in a green crop of any kind whatever, prepares the soil for producing well without any other manure; since, by this process, all that the soil has yielded is returned to it, with some additions resulting from the decomposed principles of air and water, which are contained in the plants."

"In order fully to understand this doctrine, which appears to me of great importance to agriculture, it is necessary to consider the successive changes which take place in annual plants during their growth; first, they produce green leaves, which, by coming in contact with the air, receive from it the principles of which I have spoken: subsequently the stalks increase in size and number, and are covered with numerous leaves, which absorb from the atmosphere a degree of nourishment suited to the increased wants of the plants. This state continues till after the period of flowering, when a change, worthy of note, takes place; the roots dry up, the stalks wither and change their color, and when frutification is at length completed, both roots and stalks have become mere skeletons, which answer but little purpose either for nourishing animals or manuring earth." p. 94.

But whether turned in green or dry, the plowing should not be so deep as wholly to exclude the action of the sun and air, (for acids will then be formed in the soil,) neither should cross ploughing ever succeed, as this would defeat the object intended by feeding the atmosphere instead of the soil, upon the virtues of the crop.

MANUFACTURED MANURES.

Certain manufactured substances, as bone dust, urate, poudrette, &c. might here receive a passing notice; but as they are not likely, at present, to secure much patronage among us, and certainly *should not be employed*, expensive as they are, until we have learned to save the *half of our home-made manures which is now suffered*

to be lost for want of a little attention, it is not deemed important to enter on any discussion of their merits; especially as these, together with the proper modes of applying them, are fully set forth in all our agricultural journals. We proceed, therefore, to our second division, viz:

STIMULATING MANURES.

The value of this class of manures depends, not so much on any direct impartation of food to plants, as on their agency in exciting their organs to greater activity, in appropriating to their benefit the influences of the atmosphere, in combating their insect enemies, and in dissolving the salts, neutralizing the acids, and improving the texture of the soil: as lime, marl, gypsum, ashes, saltpetre, charcoal, soot, sand, clay, &c.

LIME.

Lime has been long and extensively employed in Europe as a fertilizer of the soil, and with such success as to induce an English writer of note (Morton on Soils,) to assert, that "the majority of soils cannot be cultivated to advantage till they are dressed with lime; and whether considered as an alternative, as a stimulent, or as a manure, it will be found to be the basis of good husbandry, and of more use than all other manures put together. Whenever lime has been properly applied, it has been constantly found to prove as much superior to dung, as dung is to the rakings of the roads, or the produce of a peat mine." And says M. Puvis, a distinguished French author, "In limed earth, weeds and insects disappear. The earth if too light acquires stiffness, and is lightened if too clayey. In the same soils, with the same manure and the same tillage, by the addition to the ploughed layer of only one-thousandth part of lime, the products whether volatile or fixed, are increased in a wonderful manner; the soil of the lowest quality reaches the product of the second—the second rises one-half or more—and that of the best soil increases a fourth." Yet, strange as it may seem, there exists even among English agriculturists the greatest diversity of opinion in regard to the propriety and mode of its application on different soils, and the admission is heard on every hand, that extensive tracts of British soil have been rendered infertile by its use.

Were we to hazard an opinion on a subject regarding which not only learned farmers but "learned doctors disagree," we should say that the truth in the case was something like the following. Vegetable matter becomes the food of plants only in a state of decomposition; of this process lime is a powerful promoter; when, therefore, lime is incorporated with a soil containing much undecomposed vegetable matter, it rapidly prepares this matter for the use of plants; the immediate consequence is a great increase of vegetable products. But just in proportion to the crop produced, is the greatness of the draught upon the soil. Persisting, therefore, in the application alone of this mere exciting, *stimulating his soil to an unnatural activity, without supplying those nutrative substances which alone can sustain its strength*, the farmer finds, ere long, to his cost, that he has "overdriven his beast,"—that he has tasked his soil beyond its capabilities, and is fast reducing it to a state of exhaustion. During the early period of his experiments, while reaping his unwonted harvests, he could not sufficiently *extol*—now that he has closed the series and looks upon his jaded lands, he cannot enough *decry* the use of lime.

Such is, we apprehend, the origin, to a great extent, of that diversity of opinion which exists in regard to the *utility* of lime. Were its application always judicious, and accompanied, when necessary, with an adequate supply of nutritive matters, the probability is that no such disagreement would exist. Without, however, attempting to reconcile the multifareous and conflicting theories in relation to the use of this substance, we will proceed to notice some of the most obvious modes of its action, and leave the intelligent farmer to produce from his own experiments, (for here experiments are best indespensable,) the practice adapted to his particular soil. We observe, then,

1. Lime acts as a *specific food* for certain plants; i. e. it enters as a natural element into the composition of their substances, so that without its presence they cannot be grown to perfection. For the production, therefore, of these plants, (as potatoes and wheat, for instance,) the existence of lime in the soil is absolutely necessary. Whether any given portion of soil is destitute of this earth or not—and upon that depends entirely the propriety of its application as a *nutritive* substance—can only be determined by analysis.

2. Lime has great efficiency in *hastening the decay* of animal and vegetable matters. This is the secret of its efficacy when applied to old, matted turfs, to all peaty soils, and to such lands of whatever description as abound in undecomposed vegetable matter. To vegetable matter in a soluble state, and to animal matters in general, being easy of decomposition, it is not deemed proper to apply this substance, its tendency being, according to Chaptal, to form insoluble compounds, with almost all animal and vegetable substances that are soft, and thus to destroy their fermentative properties. Loudon also maintains that "lime should never be applied with animal manures, unless they be too rich, [?] or for the purpose of preventing noxious effluvia; and that it is injurious when mixed with any common dung, and tends to render the extracive matter insoluble."

3. Lime has the property of neutralizing any noxious vegetable acids, or metalic salts existing in the soil; which properly indicates the fitness of its application on fields infested with sorrel, on some marshy lands, (previously drained,) and on soils previously impregnated with the oxide of iron, or coperas.

4. Lime acts as an *alternative*, on both silicious and argillaceous soils, by the effect it has of giving greater adhesiveness to the particles of the former, and of diminishing the tenacity and compactness of the latter. To sandy lands, however, it should not be applied too liberally, as, if dealt out in large quantities, it will have the effect to form a kind of morter with the soil, and thus prove detrimental both to tillage and to vegetation. "Clay land bears this species of amelioration better than lighter soils. It powerfully assists all adhesive soils; and when laid on hot from the kiln upon deep clay, has been known to occasion a very great increase in the former crops."—*British Husbandry.*

5. From its cautic properties, lime is a valuable assistant to the farmer in combating those numerous insect enemies which so often ruin his hopes by depredating upon his fruit trees, his grasses, and his cultivated crops. How far he may be able to avail himself of its aid in this respect, is only to be determined by a careful series of experiments.

Finally, in the language of the work last quoted, "It is much to be regretted that some more definite judgment has not been framed regarding the properties of lime, the effects of which are exposed to the most contradictory results;" and some caution will be necessary in whatever trials may be made of it as a manure. It would be better that experiments on a small scale should precede the application of it on lands where its efficacy has not yet been proved. The quantity applied in general practice, to the acre, varies from 20 to 30 or 100 bushels, or even more, according to the character and circumstances of the soil, (the lighter and poorer the soil, and the more it has been limed, the less the quantity,) and this dressing is repeated once in four or five years, care being taken to recruit occasionally the nutrative matters in the soil, without the co-operation of which, by unanimous consent, the former substance would be worse than useless. When employed without regard to its caustic properties, it should be slacked, and then spread evenly over the surface, and if the ground be intended for cultivation, it should be exposed for several months before it is ploughed under. The effect will not commonly manifest itself before the second or third year.

[To be continued.]

MANUFACTURE OF SILK IN THE AUBURN PRISON, NEW YORK.

As the subject of manufacturing Silk in one of the New York State Prisons, has been a matter of some interest to the public a year or two past, it will assuredly be acceptible to our readers to learn how the establishment is progressing. In the New York Tribune, of Feb. 10th, 1843, we find a complete report of the superintendent, by H. Polhemus Esq., to the inspectors of the prison. Were not the document so lengthy we would be pleased to lay the whole of it before our readers, but as it is, we must let extracts suffice.

The manufacture of Silk was commenced on the 20th of May 1841, at the suggestion of the Governor. Two convicts, without experience, were put to the work on a small twisting machine. At the end of six months machinery was built in the prison, and eight convicts added to the two operatives. During the year 1842 a steam engine was employed in the establishment, and some forty hands gave themselves to the work. From the 20th of May, 1841, to the 1st of Feb. 1843, the manufactured articles amounted to $12,763 26. The agent says he has "no hesitation in declaring, that the business may be conveniently enlarged, during the present year so as to increase the force employed to 100 hands with an increase of profits exceeding 40 per cent and that it may be so extended as ultimately to employ all the convict labor."

"The agent, therefore, feels himself authorized to congratulate the inspectors on the successful introduction of a new, most interesting and most useful department of industry, which can be rendered at least as profitable as other modes of employing the convicts."

This, we have no idea is an exaggerated report for speculative purposes; for the agent only affirms that this business will as well repay for the labor as other employments. This is all we want. We desire to see no patent plans to wealth, but let it be fully understood that feeding silk worms, and reeling cocoons will pay as well as either mechanical or agricultural employments, and many may be induced to embark in this vocation. This is the time of the year to put out our orchards and make other arrangements for the silk culture, and we ask our friends not to despair—silk will be grown and manufactured in the United States beyond doubt. T. F.

GLAUBER SALTS FOR SWINE.—I have made some experiments on hogs, which were very satisfactory to myself. One day as I was returning from a store, with a paper of glauber salts, I thought I would go and take a look at my hogs. It was in the evening, just before they were fed. While I was looking at them, the paper happened to burst, and the salts fell upon the ground. The hogs devoured them greedily. I thought I would try giving them some regularly for a week, and see what effect it would have upon them. They appeared more brisk and frolicsome, and I observed at the end of the week, that they increased rapidly in weight to what they did formerly. They were then but six months old, and in about two months they weighed 350 lbs., and judging from appearances, I should think they did not weigh more than 200 before I gave them the salts. I observed it made their necks very thick, their hind legs grew larger than their fore legs, and several hogs that were before black, became nearly white, and they all appeared to thrive well.

WM. LARKIN.
Albany Cultivator.

They are few indeed who know how to be idle and innocent.

lar, and get their growth in the summer time in less than a month. Cold weather retards their growth, and those that are hatched in the fall remain in a torpid state during the winter, and get their growth slowly in the spring, at which time they do us the principal damage in cutting off the young corn and other young vegetables. Though they remain in a torpid state during the winter, they require food as soon as the weather gets warm in the spring, and if the vegetation has been all destroyed by fall or winter ploughing, which is rarely the case, they must starve. But I suppose it is not so much on his account as the turning up the ground and destroying their coverts, which allows the frost and wet to affect them. SAM'L. D. MARTIN.

COLIC IN THE HORSE.

There are few diseases more troublesome or dangerous to the horse than the colic; and it is usually in the winter that its appearance is most frequent. One of the best descriptions of the disease and its mode of treatment, is to be found in Steward's Stable Economy, from which we have condensed the following:

"The horse is usually attacked by the colic suddenly. In the stable, he paws the ground with his fore feet, lies down, rolls, sometimes quite over, lies on his back, but at times, when the distension of the belly is not great, will sometimes lie still for several minutes. When the distension is great, he neither lies or stands still a minute, but lies down and gets up incessantly, strikes his belly with his hind feet, and looks wistfully at his flanks. When standing, he makes many and fruitless attempts to urinate, and the keeper or owner generally imagines there is something wrong with the water."—Sometimes in the worst cases the swelling is very inconsiderable; but in all cases, as the disease proceeds, the pain becomes more and more intense; the horse dashes himself about with frightful violence; the perspiration runs off him in streams; his countenance betrays excessive agony, and his contortions are not suspended for a moment.

Sometimes he is attacked on the road. "If his pace is fast, he should be stopped at once. To push him on beyond a walk, even for a short distance, is certain death. The bowels are displaced, twisted and strangulated, partly by the distension, but aided a great deal by the exertion, and no medicine will restore them to their proper position." When death ensues, the bowels are found inflamed, twisted, and generally ruptured.

In the treatment of colic, the first object is to arrest the fermentation that is the primary cause, and re-establish the digestive powers.—"In mild cases, a good domestic remedy, in common use among old fashioned people, who have never heard of inflamed, spasmed or strangulated bowels, is whiskey and pepper, or gin and pepper. About half a tumbler of spirits, with a teaspoontul of pepper, given in a quart of milk or warm water, will often afford immediate relief. If the pain do not abate in twenty or thirty minutes, repeat the dose. Four ounces of spirits of turpentine, with twice as much sweet oil, is much stronger; but if the horse is much averse to the medicine, turpentine is not always safe."

"There is, however, a better remedy, which should always be in readiness wherever several draft horses are kept. Take a quart of brandy, add to it four ounces of sweet spirits of nitre, and three ounces of cloves. In eight days this mixture or tincture is ready for use; the cloves may still remain in the bottle, but they are not to be given. Set the bottle by, and label it distinctly, "Colic Tincture." The dose is six ounces, to be given in a quart of milk or warm water, every fifteen or twenty minutes, till the horse is cured. Keep his head straight and not too high when it is given. Do not pull out his tongue, as some stupid people do when giving a drink. Give him room, and if he will not stand till the drink be given, watch him when down, and give it, though he be lying, whenever you can get him to take a mouthful; but give the dose as quickly as possible. After that, rub the body with a soft wisp, walk the horse about *very slowly*, or give him a good bed and room to roll. In eight cases out of nine, this treatment will succeed, provided the medicine be got down the horse's throat before his bowels become inflamed, or strangulated or burst. The delay of half an hour may be fatal. When the second dose does not produce the relief desired, the third may be of double or treble quantity. I have given a full quart in about an hour, but the horse was very ill."

Bottles are generally used for giving medicine to horses, but unless the neck is wound with twine, there is danger of the horse breaking it with his teeth, and injuring himself with the pieces. A large horn, with a small point for insertion in the mouth, is preferred by many, as exempt from this danger.—*Albany Cultivator.*

SWEET POTATOES FOR HOGS.—It is generally admitted, that our sweet potatoes constitute an excellent article of food for hogs, and it is well known too, that few plants yield a greater amount of nutritious matter to the acre. Heretofore, however, planters have generally neglected to avail themselves of the advantages of this crop for their stock. It is true, if the potatoes are to be dug and thrown to the hogs, the planter loses much valuable labor from his crop, at a very important season. But this is not necessary; by making the potatoe patch long and narrow, (say a half or a fourth acre wide,) and a few hours labor once a week in running a cross fence, a stock of hogs may be kept fat from the first of August until the pea fields are open, with very little expense. For example, let him run a low fence across, so as to cut off a small portion of the patch and turn his hogs on this. While they are consuming the vines and roots on this portion, the potatoes in the other part are still growing undisturbed. When this portion has been eaten out entirely, let the planter have his cross-fence moved up a little farther, and thus give his hogs access to a fresh portion of the potato field. This plant, we think, commends itself to the attention of planters on several accounts. The cheapness of the food; its being ready for use at an important season for pushing forward young hogs, (and nearly every Southern planter kills his hogs young,) the greater amount of pork it enables him to raise, and the less corn it requires in the fall to make his hogs fully fat. And we may add to these, that every hog is thus made to gather his own harvest. The cheapness of this article of food, (when the labor of harvesting is saved,) certainly cannot be questioned. For from two to four hundred bushels of roots, besides the vines, per acre, is no small amount of nutritious matter for the labor bestowed in culture. If any one needs to be convinced that August is an important month for pushing forward hogs that are to be killed in the fall, let him try to fatten a very poor hog—he will eat more than his bacon will be worth. And, in fact, a year old that has been kept poor until the pea fields are open, will yield very little bacon. This plan enables the planter to keep his hogs fat and growing rapidly from the first of August until killing time. For by the time the potatoes are fully eaten out, the pea fields may be opened, and by the time they are done and the hogs confined ten days on corn, to harden the fat, the weather will probably be cold enough to kill. And here another advantage is gained. For the most successful curers of bacon we know, all agree that the earlier you can kill your hogs, the surer you are to have your bacon free from bugs in the summer.—*Planter.*

TO KILL LICE ON ANIMALS.—"Take the water in which potatoes have been boiled and rub it over the skin. The lice will die within two hours. I have used ten kinds of the strongest poisons to kill lice, all with effect, but none so perfect as this."—*Central N. Y. Farmer.*

HORTICULTURE, the attendant and embellisher of agriculture, which provides so many palatable and healthful additions to the substantial produce of the field, and correctors of the undue stimulus and acrimony of much animal food, merits all the fostering care which an uncorrupted and yet educated and refined taste has ever extended to it. A well cultivated garden, in due alternation of vegetable, fruit and flower, gives us poetry without its illusions—nature divested of her ruggedness, and art of its constraint —*Dr. Bell.*

CULTIVATION OF SILK.—We have been informed that East Baton Rouge is soon to become the seat of a regular silk plantation, whereby the most ample test will be given to the project of making this article one of the staples of the State. A gentleman named Vasseur, just arrived from France, has purchased land, and is making rapid arrangements to commence the business, in which he has the experience of many years.—*Baton Rouge Gazette.*

As spring, with its cheering sunshine, and refreshing showers, reanimates to new life the growth of vegetation; so the soothing accents of love and sympathy restore to wonted brightness the heart desolated by grief; causing it to put forth the shoots of gratitude and joy.

Fragments of Time.

A good temper, a good library, good health, and a good wife, are four choice blessings.

AUGUSTA MARKET.

TUESDAY P. M., May 9.

Cotton—Our market continues animated, and sales to a considerable extent have been made during the week, at prices fully sustaining the advance we have heretofore reported, and the market closes firm. We quote 4¾ @ 7 cents as the extremes of the market.

Exchange—The rate of Exchange continues at par on all points north and east of us. Central money 23 ℔ cent discount; Alabama 20 @ 25. No sales of other depreciated bills to report.

CONTENTS OF THIS NUMBER.

	PAGE.
Mr. Foote's Prize Essay, continued	73
Manufacture of Silk in the Auburn Prison; Glauber Salts for Hogs	75
On the Alternation of Crops	76
Faith and Works; Salt in Agriculture	77
Bommer's Manure	78
Our Issue; Correction; Recipe for killing Catterpillars; Remedy for Inflammation in the Eye of the Horse, &c.; Culture of the Sweet Potato; Punctuality; Cut Worms	79
Colic in Horses; Sweet Potatoes for Hogs; To kill Lice on Animals; Horticulture; Cultivation of Silk; Augusta Market	80

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COMMUNICATIONS.

CURING SWEET POTATOES.

MR. EDITOR—In looking over the last Cultivator, I see something said about curing sweet potatoes, which should interest a Georgian as much as does the Irish potato a Northerner, for I have long been of the opinion, that one acre of land well planted and cultivated in potatoes, would yield more profit to a family than any other cultivation we could give it, and, although it is generally admitted, it is frequently neglected, from the idea that they will not keep sound and good through the winter. This is all a notion, and, in too many instances, to be attributed to carelessness and a dependence on servants, who too frequently are reckless of the interest of their masters. I was brought up on a plantation, and of course partly raised on potatoes; for my father was always successful in raising and saving them, and his manner of planting and cultivating was something similar to Mr. McKinley's, for I do not recollect of ever seeing a potato hill on his plantation. I now have the same in possession, and have endeavored to pursue the same course of making and curing, and up to this moment have had no reason to complain of rotten potatoes at any season of the year.

My mode of putting them up is simply this: I dig so soon as I find the vines have been killed or bitten by the frost, (cotton or no cotton in the field.) I then select my seed from the eating roots, being careful to have no cut or broken ones thrown with them. I then have them carried and put in a potato house, built expressly for the purpose. It is built of small logs, and left rather open except at the end where I pack up the potatoes. The house is long and narrow, and should be built according to the quantity a person is in the habit of making. Before digging, I am particular in having the house perfectly dry, and a plenty of dry sand to cover the potatoes with. The ground is scraped off until it is hard and smooth. I then have the potatoes deposited, and as they continue to rise on the sides of the house, I place, with a shovel, the dry sand a few inches thick between the wall and potatoes, which is two sides and one end.—I then leave them in this situation until I find a change in the weather, which gives them a chance for airing and drying. If a few sharp frosts should come along, I throw a little light straw or grass over them, and remove it when the weather becomes more warm; but so soon as I find it getting cold enough for freezing, I then throw my dry sand over the naked potatoes until they are completely covered; and in this and no other way have I saved them until late in the spring.

It may appear to some that this preparation will be rather troublesome; but they should recollect, when it is once effected it is but little trouble, for the same house and sand will last a lifetime.

Should any doubt my plan and assertions, all I have to say is for them to try it, and should they have cause for talking of rotten potatoes, let them call on me the 24th of May, of each and every year, and they shall have a potato dinner.

A PLANTER.

Green County, Ga., May 10, 1843.

EDEN, EFFINGHAM COUNTY, GA., May 16th, 1843.

MR. EDITOR—In your last number you invite communications upon the subject of preserving the sweet potato. As I have had some experience in that way, I will give you what I have found to be the most successful plan. Large hills or banks never keep so well as small ones; twenty bushels are sufficient. I open a hole or bed about a foot deep, in high dry land, (deeper would be better,) put the potatoes in in a conical form, and cover with pine straw and corn stalks, or stalks alone, at first, and then with earth from eight to twelve inches deep. Covering lightly at first and increasing the quantity of earth as the cold increases, would probably be better; but I have always found more risk in covering too lightly than too heavily. The only advantage in putting straw or stalks, is to keep the earth from mixing with the potatoes, as I have no doubt they would keep equally well, or better, to put the earth on without either straw or stalks. I built a house some years ago of clay, the walls about a foot thick, and covered (under the roof) in the same manner, but I found it would not preserve my potatoes. When I open a hill I now remove the contents to this house during winter, but in spring, say early in May, I remove my potatoes to a dry house or loft, for if left in the hill, they sprout or become too moist and soft to be good. I seldom keep the Spanish so late, but I rarely fail to have the yam till new potatoes are dug.

I have no doubt Mr. McKinley's plan for planting is good in the up country, or where the land is stiff and dry, but in our level, sandy soil, I think the bed much better. He thinks it best to air or dry the potatoes before they are put in the hill. This I consider decidedly injurious, and inconsistent with his next plan, of putting them under the ground, which, he says truly, is the natural way. I believe the sooner the potatoes are put in the hill after they are dug the better.

While upon the subject of the potato, allow me to enquire, through your valuable paper, whether any experiments have ever been made to test the practicability of making sugar from sweet potatoes, as I have no doubt the yam potato is equal, if not superior, to the beet for that purpose.

Very respectfully yours,

C. POWERS.

MODE OF STOPPING GULLIES IN LAND.

MR. JONES—It is a matter of no small magnitude to know effectually the best plan to stop washes through our fields. In consequence of so many small valleys or washes on our hill sides, many of our planters are prevented from manuring, from the fact that the manure will all wash away in a short time, and those valleys are also a preventive of horizontal ditching, as the water will still be conveyed in them, consequently they cannot be ploughed across after running the side ditches. To remedy the evil I will here give my mode of effecting this desirable object.

Before I commence running my ditches, I haul leaves from the woods and cover over the galded places to a depth not to be difficult to plough. I then commence with a dagern plow in the bottom of the gully, plowing up and down the whole length of the valley or gully, throwing the dirt in the valley from both sides, until I reach the level part of ground; then if the first operation does not fill up, I repeat it until the valley becomes a plain. After this is done you can run your side ditches, and manure to your liking, and it will be as easy to cultivate as any other part of the field.

But some will say that "my gullies are too deep," (true enough) and how to prevent its progress they are at a loss to know. To such unfortunate farmers I would say, gather every combustible that can be procured, and fill up the deep gullies* to within one foot of the top, take your dagern plow and commence in the edges of the gully, and with hoes haul the dirt over this filling, and in the course of two years you can make this a plain and cultivate over it. The filling may be any thing you can procure, such as rocks, logs, brush and other things, no matter what so the gully is filled. If rock is used it should always be put at the bottom. I have often been defeated in stopping gullies by throwing in logs, making dams across, which always made two for one.

This work should be done in the winter, when

the ground is soft, and the side ditch run without delay, to prevent a loss of labor.

If this mode of improving our land is taken in time, it will prevent much labor; for so long as hilly land is cultivated without side ditching, so long will it continue to wash in gullies, and become more difficult to stop. Had our farmers commenced this mode of improvement years past, our old red hill Georgia would now present quite a different aspect; but* alas! alas! it is not so.

Mr. Editor, I long to see the day when the Cultivator will be filled with the productions of Georgia writers; then I shall know that improvement is with our farmers; but so long as we neglect to exchange ideas, so long will we continue to follow our old plans of culture, and the consequence will be light crops and a yearly increase of gullies. Say who will try the experiment. Come, let me hear from you.

JOHN ROOT.

Green County, Ga., May 11th, 1843.

*Some gullies are too deep to do any thing with.

To the Editors of the Southern Cultivator:

GENTLEMEN:—I am much pleased to learn that you are publishing a paper devoted to agriculture in Georgia. I have not seen your paper, and, therefore, can say nothing of its merits; but surely something of the kind is much needed among us. We murder up land and timber in Georgia, as if we all believed in Millerism. The object of the machinist is, with a given power to overcome the greatest resistance, or to produce the greatest possible effect. So the object of the planter should be, with a given amount of capital and labor, to produce the greatest possible amount of wealth, and to do this he must get all the information he can on the subject. The wealth and prosperity of our country depends on the industry and economy of the people. But surely it is possible to be industrious to little purpose, or to work to disadvantage, and this thing does actually happen among us. To cure, or at least qualify, this evil, is what I suppose to be the object of your paper, and that it may be well conducted and well patronised, I think must be the wish of every friend to the country. I only plant on a small scale, and I am reading two papers of the kind already, so that I can not say whether I will take your paper the present year or not; but I wish to see it very much, and perhaps you would do well to send me one number. Should I conclude to take it, I will send you the change immediately; if not, I will at all events show it to such of my neighbors as I think will take it.

The silk culture is now getting some part of the attention in the United States which its vast importance to the country requires, and, because of this, I will take the liberty to make some remarks on that subject, which you can dispose of as you like.

I have been cultivating silk, in a small way, for several years, and my experiments prove, I think, conclusively, that it is an easy matter to produce silk in Georgia. My constant success in the business will not admit of any other conclusion. I know but little about the business, and when I commenced I certainly knew less, and yet I have been constantly successful. We have surmounted what are known to be the greatest difficulties in the business, and so have others, and so may all that will. I have read some on the subject, and have thought much, and, after all, I firmly believe that silk can be cultivated in Georgia to as much profit as it can be in any part of the world. From every thing I know on the subject, the time, I think, will come, when it will be ascertained that Georgia silk is a superior article.

It is, I think, admitted by every person who has used our sewing silk, that it is from 10 to 25 per cent stronger than Italian silk, and if we had the same skill in manufacturing the article that they have in Italy, our silk would surpass theirs as much in beauty as it now surpasses it in strength. I believe, and believe candidly, that the silk culture can be made a better business in Georgia than cotton ever has been.—Whether I am mistaken in this matter or not, I certainly believe it, and I should not be acting the patriot to keep silent on the subject. I believe every body in this neighborhood admits now that silk is easily produced, and surely every body knows that it is a valuable article when produced, and, notwithstanding all this, little interest is taken in the matter. What I think is wanting in this section is, a market for cocoons and raw silk. If there was a market for cocoons, the very poorest people could and would make them, for it neither requires much capital or skill to do this much. A black man of mine one year made three bushels of splendid cocoons in his own time. These were worth $12, and this was about as much as he could have made at any other business, provided he had devoted his whole time to it. I am pretty sure that if we knew as well how to cultivate silk as we do cotton, we could make it for $1½ per pound. The writers on the silk culture have had too much to say about flues, furnaces, stoves, thermometers, &c. &c. In this way they have magnified the difficulties and thus discouraged the people. I cannot say but all these appendages may be necessary in other places, but, to my certain knowledge, here they can be dispensed with. There is certainly but little difficulty in any part of the business in Georgia. The reeling is given up to be the most difficult operation, and this I think less difficult than the art of spinning cotton. The difficulty in reeling silk lies entirely in the value of the article. If silk was worth no more than cotton, we should have plenty of silk reelers. Every person that commences reeling silk is certain to spoil some of it, and spoiling or wasting so valuable an article is surely not a cash business, and here they abandon the reeling.

Since I commenced writing this letter, a lady who has been in the business and abandoned it, tells me she would commence again if she could get $2 a bushel for cocoons. Now the value of cocoons is from $3 to $5 a bushel. Another lady told me she thought her silk did not cost her more than wool. I have had more experience in the business perhaps than any person within fifty miles of me, and my opinion is that cocoons can be produced at $1. I would rather make cocoons than wheat at the same price.

It is a mistake to suppose the prosperity of this country depends on any thing but the industry, skill and economy of the people. If a great many people are idle in the country, poverty will be the consequence, whether they are idle from necessity or choice, the result will be the same. A great many people in our country are, no doubt, idle from choice, but there are some idle "because no man hath hired them." Humanity, justice and the good of the country, all require that these should have employment, and that the silk culture can be made to give a profitable employment to an immense number of persons, is a matter about which I have not the shadow of a doubt. The condition of our country, beyond all doubt, requires the best exertion of all its friends. In every direction we see nothing but distress and privation; and, if we may believe our newspapers, or our eyes, the moral condition of the country is no better than that of its pecuniary condition. All these evils originate from the same prolific source.—Idleness, beyond doubt, is one of the greatest sources of moral and physical evil known in our world, and yet it goes unrebuked. Every idle person is as certainly maintained by those that are not idle, as a man in jail is maintained in that way, and unless a person contributes to the good of the country in some way, he is just as certainly an evil, as a great fire in a city is evil. In Georgia we are cursed with blessings. We have a climate that produces almost every thing that is produced in the world. We have iron mines, gold mines, water power to a great extent, and we can produce silk, one of the most valuable articles in the world, in away that I certainly do not believe it can be produced elsewhere, and yet, under all these circumstances, we are not ashamed to cry hard times, hard times.

I have carried on the silk in connection with other business, so that it is impossible that I could give details, and, besides that, I have not paid that attention to facts that I might have done. I never measured or weighed my cocoons but one year; that year I made in out buildings and a part of our dwelling, 44 bushels. I am sure a person can reel a pound of silk in a day, and can wind it in less time. The worst operation is to twist it. A young lady in our employ has twisted, on a common cotton wheel, one-third of a pound of sewing silk in a day, and, in another day, the same young lady twisted 28 cuts of warp, or warp for 2 8-10 yards.

Yours, respectfully,

A. E. ERNEST.

Bibb County, May 11th, 1843.

TO CURE BUTTER.—Take two parts of the best common salt, one part of sugar, and one part of saltpetre; beat them up, and blend the whole together. Take one ounce of this composition for every sixteen ounces of butter, work it well into the mass, and close it up for use. Butter cured in this way, appears of a rich, marrowy consistence and fine color, and acquires a brittle hardness nor tastes of salt. It will likewise taste good three years, only observing that it must stand three weeks or a month before it is used.—*Selected.*

MR. FOOTE'S PRIZE ESSAY.

[Concluded from page 75.]

MARL.

Marl being but a modification of lime, combined with variable proportions of divers other substances, it may be observed, in general, that whatever principles are applicable to lime, (after having been deprived of its causticity,) are applicable also to the use of marl, so far as its *nature* only is regarded. We shall, therefore, treat but very briefly of this substance. Suffice it to say, that its value has been highly appreciated in Europe, and in those portions of our own country where it has been most extensively employed, and that, wherever it is practicable, the strong probability is that the farmer will find his interest in making a thorough trial of it.

The most common locality of marl is low, wet swamps. It is readily distinguished from other light soils by its light grey color when wet, and its white, chalky appearance when dry.—Its whiteness, indeed, will commonly indicate pretty nearly its comparative value; since both depend on the amount of lime it contains. A sure test, however, of the amount of lime present, will be to apply to it a few drops of sharp vinegar. If the marl be worth employing as a manure, it will effervesce; i. e. small bubbles will appear, occasioned by the escape of gas.

In applying marl to different kinds of soil, particular reference should be had to two circumstances; 1st. The amount of its calcareous matter. 2d. Its texture. If the proportion of its calcareous matter be large, the smaller will be the quantity proper to be applied, and vice versa. Again, if the marl be of a strong adhesive texture, containing a large amount of clay, its application will be most profitable on loose, silicious soils; if on the other hand, it be of a sandy or shelly character, strong loams and clays will be most benefitted by its reception.—The common mode of its application is to spread it evenly over the surface, and in case of cultivated crops never to turn it under till it has been thoroughly crumbled down by the action of the atmosphere. The reason of this practice is thus stated by Chaptal: "It is necessary for earths, in order to possess great fertilizing powers, to be saturated with all the principles which they can imbibe from the atmosphere. Thus those which, by the depth of their beds, have been constantly secluded from the action of the air, will require to be exposed to it a longer time before becoming fertile. The lime contained in marl, as it is taken from the bed, is never saturated with carbonic acid; but after being exposed to the air, it becomes at length saturated with the acid it receives from it, crumbles and effervesces. The decomposition of marl may be hastened by frequently turning it, so as to allow the air free access to the lime; and this method is generally practiced by those who employ marl as a manure."—p. 44.

The quantity applied per acre may vary, according to circumstances, from five to twenty-five or thirty wagon loads. For a full discussion of this subject, see Hitchcock's Geology of Massachusetts, a copy of which has been lodged with the town clerk of every town in the Commonwealth.

GYPSUM, OR PLASTER.

Plaster, first introduced into the United States from Paris by Dr. Franklin, has effected the most important improvement in agriculture perhaps that has ever been made. Extensive districts in this and other countries, have been benefitted by its introduction to an extent which, considering the comparatively *small amount* of the substance employed is truly astonishing. In Germany, says Lampodius, one of her own agricultural writers, "It may with certainty be stated, that by the use of gypsum, the produce of clover, and the consequent amount of live stock have been increased *at least one third*."

"There are, however, some tracts of country where the use of plaster has been attempted without success. But this arose from its being one of the original constituents of the soil, which derived no advantage from the addition of a new quantity. The existence of this salt naturally, in those lands upon which plaster produced little or no effect, has been proved by analysis."—Chaptal, p. 73.

Much mystery has heretofore enveloped the modus operandi of this manure; but before the light of science the cloud is vanishing away.—Many have supposed its efficacy to arise from the *specific food* which it furnished to certain plants, as to clover, for instance, which seems especially benefitted by its application. But when we consider that by the application of a *handful*, as it were, of this manure, upon an acre of good ground, the product is increased from a few hundreds to *tons* of grass, it is at once apparent that, on such a supposition, the cause is wholly inadequate to the effect. It was reserved for the gifted and honored Liebig to lift the veil, and to produce a theory, not only plausible in itself, but fully sustained in all its parts by the experience of practical men.

His theory is this: that the efficacy of plaster consists in its arresting, as it rises in exhalations from the soil, or descends in rain, dew or snow from the atmosphere, the ammonia which is generated by the decay of animal matter and appropriating it to the use of the growing crop. We will permit him to present his own views, however, in a few extracts from his Organic Chemistry.

"Nitrogen exists in every part of the vegetable structure."—p. 88. "All animal," [and vegetable] "bodies, during their decay, yield the nitrogen which they contain, to the atmosphere, in the form of ammonia."—p. 72. "The evident influence of gypsum depends only upon its fixing in the soil the ammonia of the atmosphere, which would otherwise be volatilized, with the water which evaporates."—p. 75. "In order to form a conception of the effect of gypsum, it may be sufficient to remark, that 100 lbs. of burned gypsum fixes as much ammonia in the soil as 6250 lbs. of horse's urine would yield to it."—p. 88. "If a field be strewed with gypsum, and then with putrified urine, or the draining of dung hills, all the carbonic of ammonia will be converted into the sulphate, which will remain in the soil."—p. 184. "If we strew the floors of our stables, from time to time, with common gypsum, they will lose all their offensive smell, and none of the ammonia which forms can be lost, but will be retained in a condition serviceable as a manure."—p. 185. "But this is not all. When we give a plant nitrogen in considerable quantity, we enable it to attract with greater energy from the atmosphere, the carbon which is necessary for its nutrition."—138. Now "carbon enters into the composition of all plants."—3. So that, by strewing a field with gypsum, we enable plants to supply themselves from the atmosphere, not only with nitrogen, on which their most nutritious principles depend, but also with carbon, the chief constituent of all their frame work.

This theory is confirmed by several circumstances which have long attracted the attention of the observing farmer.

1. It has been observed that plaster acts with increased efficacy when applied in connection with manures, or recently manured lands. The solution of the phenomena by our theory is easy and satisfactory. The ammonia, which would otherwise escape from the decomposing manure into the atmosphere, is seized upon by the plaster, detained in the soil, and wholly converted to the use of the growing crop.

2. It has been observed that plaster acts with greater power on soils which have been recently stirred, than on those which have lain for a long time unmoved. Solution—By stirring the soil its porosity is increased; consequently it absorbs more freely the dews that fall upon it—from which the plaster separates and hoards up in the soil, the rich deposits of the atmosphere. In proof of the extent to which the atmosphere is charged with fertilizing matters, which the rains and dews are constantly depositing upon the surface of the earth, we will here introduce the substance of a statement made to the American editor of Liebig, by Mr. E. Tufts, of Charlestown.

"Eight years since, about three quarters of an acre of land, situated on one side of a lane and on a declivity, were broken up. About the same time, the propriotor of a field on the opposite side of the lane, and above the land of Mr. T., commenced gardening on a large scale, and formed an immense bed of compost in the lane. This heap was made up of animal and vegetable matters, and from receiving constant additions is continually undergoing fermentation, and the gases and vapors emanating from it are always perceptible. Four years ago Mr. T. observed, that in some inexplicable way, his land had become so fertile as to induce him to dispense with the use of manure; he has not since used it, and is now fully persuaded that its fertility is owing to certain vapors arising from the heap and then descending on his land. None of the soluble matters of the heap are carried to Mr. T.'s field, no manure has been applied, and its fertility continues unimpaired."—*Appendix to Liebig, p.* 366.

3. Plaster has been observed to produce but slight effects upon old, dry and hide-bound meadows. Says Liebig, (p. 87,) "Water is absolutely necessary to effect the decomposition of gypsum, and also to assist in the absorption of the sulphate of ammonia by the plants: hence it happens that gypsum is not observable on dry fields and meadows." To which may be added, that but a small quantity of putrescent matter existing in such cases, the exhalations are inconsiderable; and what is deposited from the atmosphere by dews cannot be absorbed by the soil in consequence of its compact, impenetrable surface. On old, and even dry pasture lands, the effect is much greater, there being ever present on their surface, a portion of manure to serve as a basis for its action.

4. It has been universally observed that the most striking effect of plaster is on the clover crop. Reason—"Red clover contains double the quantity of nitrogen that common hay does."—*Gray, p.* 158.

5. It has occurred, in the experience of different farmers, that where one part of the field is sown with plaster immediately before a thunder shower, and another directly after the same shower, the portion sown first was benefited in a far higher degree than the other. Reason—"Rain water must, at all times, contain ammonia, though not always in equal quantity. It must be greater in summer than in spring or winter, because the intervals of time between the showers are greater. The rain of a thunder shower after a long protracted drought contains the greatest quantity which is conveyed to the earth at any one time."—*Liebig, p.* 73.

6. Considering the beneficial effects of plaster at large, it has been observed that they depend, in general, not so much on any peculiarity in the location, or composition of soils, as on those physical conditions which render the surface of the soil an easy medium for the transition of soluble matter: all of which must go to corroborate the theory in question.

From the views thus presented, we are led to infer—

1. That the atmosphere is an inexhaustible source of food for plants. 2. That the most available agent for securing the benefit of this food to plants is plaster. 3. That viewed in this light, the value of plaster in agriculture can hardly be over-rated. 4. Then it may be safely recommended for general use on all soils containing a portion of fermentative matters, and not so compact or wet, as to prevent the process of exhalation and absorption. 5. That it should always be applied to the surface of the soil, or at least within the influence of the atmosphere. 6. That it should be sown at an early date in the season, before the period of the most abundant dews and exhalations has commenced. 7. That it should always accompany manures used as a top dressing, or only slightly buried in the soil: and 8. That it should be liberally

employed about our barnyards, stables, vaults, manure heaps, compost beds, &c.—not however in compost under the supposition that it will hasten the fermentation of the mass. "Davey has refuted this opinion by direct experiment, placing it beyond a doubt, that the mixture of plaster with manures, whether animal or vegetable, does not facilitate decomposition.—*Chaptal, p.* 74.

The proper quantity to be used when sown broadcast upon the field, has been decided by experience, as also by chemical science, to be from one to one and a half bushels per acre.

WOOD ASHES.

Ashes, whether "live" or leached, considering the certainty, uniformity and power with which they act, as well as the permanency of their action upon vegetation, may well be ranked among the very best manures. The *fact* of this superiority over other manures is very generally understood: the *reason* of this superiority appears quite obvious when we reflect that they are composed entirely of organised matter, reduced to the most consolidated form, and when, further, we learn from chemistry that their chief bulk consists of the very material which enters most largely into the finer grains and grasses. Yet, strange as it may be, no inconsiderable portion of this priceless article is suffered to be lost to all the purposes of cultivation, being permitted to lie waste about our dwellings, and to disappear as useless rubbish. To this remark, however, we find (by going to be sure a great way off for it,) one very striking exception.—Even leached ashes, transported thither from every State in New England, and all the way from the Canadas, "are bought up on L. Island at an expense of from 35 to 50 cents a bushel, and considered a profitable investment at that."—*Cult. vol.* 6, *p.* 42.

The most profitable use of this manure, when applied directly to crops, is probably on light silicious soils—ashes being admirably calculated not only to improve the texture of such soils, but to furnish to them just that kind of organic matter in which they are most liable to be deficient. They may be applied, however, with certain benefit to any soil, and that either by spreading them upon the surface of grass or grain lands, or by applying them to the hill or drills in the case of hoed crops. The practice of dropping a handful in the hill at the time of planting, has been practised by many farmers, and with excellent results. But perhaps their highest value will be found in the compost bed, since being capable of liberating a large amount of nitrogen, they will greatly promote the process of fermentation. "One bushel of ashes contains 5½ lbs. of potash, a quantity sufficient to decompose 200 lbs. of peat earth."—*Gray's Elements, p.* 318.

SALTPETRE.

Saltpetre, as a manure, has been employed in the way of experiment, by several of our enterprising farmers, and in some instances with signal benefit to the crops to which it has been applied; its use however has been abandoned by the most judicious, as being more expensive than profitable. That a solution of this may be serviceable for soaking seed corn, has been established by the experience of many of our farmers. That it may also be employed effectually, to banish the canker-worm from our apple orchards, appears from an experiment made by O. M. Whipple, Esq. of Lowel—an account of which may be found in Colman's Fourth Report, p. 335.

Considerable quantities of this subject frequently accumulate in combination with earth, under old buildings, particularly barns and horse sheds—when available in this form, the expense of saving and applying it will always be exceeded by the profit.

COMMON SALT.

Common salt, highly recommended as a manure by some, has been as much depreciated by others, and hence, when directly applied, is considered as a doubtful fertilizer by almost all.—The obscurity in regard to its use, however, rests chiefly on the quantity which ought to be employed. The result of comparative experiments made in Germany, showed that a very few pounds per acre were sufficient to produce a largely increased return of grass—while in England it has been beneficially applied within the wide limits of from 5 to 20 bushels per acre, and when used for cleaning the land in autumn, of 30 bushels an acre.—*Appendix to Johnson, p.* 5.

Employed in moderate quantities in composts, salt is highly promotive of fermentation; applied liberally late in the fall, or early in the spring, is very destructive to worms and insects; used in the form of a brine for soaking seed wheat, it prevents the smut; and it otherwise acts beneficially—by stimulating the absorbent vessels of plants, or imparting to them direct food: by preventing injury from the sudden transitions of temperature, and by increasing the moisture of dry hot soils. It has a specific effect upon all plants of the cabbage and onion tribe—nothing is more beneficial to an asparagus bed; and it is suggested to those who consult their own interests by rearing the most valuable kinds of fruits, to try the experiment, cautiously, of applying salt or brine in moderate quantities, about the roots of their trees.—*Farm. Cabinet.*

Whether, however, it will be expedient for farmers to introduce this manure in general practice, even if it suit his particular soil, is wholly to be decided by a reference to its comparative expensiveness.

CHARCOAL.

"Charcoal," says Liebig, "surpasses all other substances in the power which it possesses of condensing ammonia within its pores, particularly when it has been previously heated to redness. It absorbs 90 times its volume of ammonial gas, which may be again separated by simply moistening it with water."—p. 89.

"It is by virtue of this power that the roots of plants are supplied in charcoal exactly as in humans, with an atmosphere of carbonic acid and air, which is renewed as quickly as it is abstracted."—p. 91. Being at the same time "the most unchangeable substance," it is not surprising that it should constitute, not only one of the most powerful, but quite the most *durable* manure in existence.

In the language of J. Hepburn, Esq., of Lycoming, Pa., (Cult. vol. 9, p. 106.) As charcoal is almost indestructible, and its effects remain as long as it exists in the soil, it is possible that it may be found one of the cheapest as well as most efficient manures for some crops and on some soils. It appears evident from the manner of its action, that plants requiring the greatest supply of nitrogen would be the most benefited by its application, and hence its efficacy when given to wheat."

Again, "charcoal has a *physical* as well as a chemical effect on soils, decidedly useful. It renders them as far as it is present, light and friable; and gives additional warmth to them by its color, which absorbs and retains readily the rays of the sun during the day." Mr. Hepburn also states the important fact, that whenever charcoal has been applied *rust never effects the growing crop of wheat.*" Its use may also be recommended, on trustworthy authorities, as an excellent means of curing diseased trees and unhealthy plants. In the neighborhood of forges, furnaces, smithies and coalpits, considerable quantities of this manure can be obtained at trifling cost, and it becomes the vigilant farmer to see that none of it is suffered to be lost.

SOOT.

This substance, consisting chiefly of geine, nitrogen, and the salts of lime, potash, soda, ammonia, is ranked by Dr. Dana "among the most powerful of manures in the class consisting of geine and salts. He observes: "On the principles adopted for determining the value of manures, the salts in 100 lbs. of soot, are equal to one ton of cow-dung. Its nitrogen gives in a value, composed with cow dung, as 40 to 1."—*Manual, p.* 161.

A most satisfactory experiment with this substance has been tried by the writer the present year. From two to three quarts of soot, which had been collected from the fire place the last autumn, and lain exposed to the weather thro' the winter, was, some time in April, carefully incorporated with the soil about the roots of an egg plumb tree, which though it had borne fruit repeatedly, had attained but a very small size, and had not in the last seven years put out so many inches of new wood. The result has been, that, by actual measurement, it has sent forth numerous shoots the past season, from two to three feet long, and one to the length of four feet and a half.

SAND, GRAVEL AND CLAY.

Pure sand and gravel, from the obvious tendency they have to separate the particles, and thus increase the porosity of a tenacious and compact soil, may readily be supposed to possess no inconsiderable influence in improving such lands, as by retaining too much water on their surface, are rendered unpleasant and difficult of cultivation and to a greater or less degree unfruitful. It might also be taken for granted that pure clay would be alike beneficial when employed to give solidity to such light and porous soils as are incapable of retaining manures, and exposed to suffer severely from drought.

"On sandy soils, a load of clay properly incorporated, will produce a greater, because a more lasting, effect, than a load of manure. Of this the fine farm formerly owned by Judge Buel, is an example. This was originally a hungry, porous sand. To give it tenacity and proper retentiveness of moisture, Judge Buel covered his fields with clay from the Albany claybanks, at the rate of from 20 to 30 loads per acre; and his experience convinced him that a load of such clay (it contained from 20 to 30 per cent of lime,) was of more benefit than a load of barnyard manure. He distributed his clay as fast as drawn, upon the sward or surface, where it was decomposed by the rains and frosts, when it was pulverised by the roller, and further distributed by the harrow.—*Cultivator, vol.* 9, *p.* 45.

"Even sand upon clay, or clay upon sand, are beneficial applications to improve the soil: the only question being, how far the benefits will repay the expense of application. The earthy materials are to plants, what the stomach is to animals—the recipient of food, and the labratory of the main process of nutrition. The presence of clay lime and sand, are all essential in the soil, to enable it to perform its healthful functions. Where either of these is naturally deficient, it may be artificially supplied with manifest advantage."—*Cult.*

COMPOSTS.

The *absolute value* of a compost depends on the amount of food it is capable of furnishing to plants. Its value *in relation to a particular soil*, will depend also, in a measure, on the effect it is calculated to have on the *texture* of the soil. The question of profit in *making* composts at all, depends upon whether, by any means, the farmer can incorporate with his soil any valuable animal, vegetable or mineral substances, which he might not *otherwise* appropriate to his crops with equal benefit, and at an equal expense.

One thing is certain; "nothing can be *added* to the elements of fertility by mixing animal, vegetable or mineral matters in a compost heap." The only questions then to be decided are, 1. Can any fertilizing matters within the farmer's reach be *better saved*—i. e. *more profitably* saved by the employment of compost heaps; and 2. Can any such matters be more cheaply brought into *a fitter state for the use of plants*, by their means. The first of these questions, it is believed, will not, as a general thing, admit of an affirmative answer;—for, by following the directions already laid down for the preservation of manures, the object will be nearly if not quite as effectual, and far more cheaply accomplished than by resorting to composts.

The only consideration then, if "we have thus far trod on solid ground," which can render the system of composting highly advantageous to the farmer, will be the circumstance of his having on hand such animal or vegetable matters as cannot properly, or to a sufficient amount, be decomposed in his barnyard. Such exigency will not be unfrequent. The farmer may have the misforture, by accident or disease, to loose a horse, a cow, or a score of sheep.—These are all appropriate subjects of the compost bed, and should never be suffered to decompose in the open air, so long as earth of any kind can be obtained to cover them, and to absorb the nitrogen which will escape during the process of putrefaction. Again, peat earth, swamp-muck, and similar substances, in which there exists a large amount of coarse woolly fibre, may be the most conveniently, and most effectually reduced to a proper condition for the use of plants, in compost beds—especially in case a large amount of these matters is required in the operations of the farm.

How, then, the question now arises, shall we most readily, and at the least expense, effect the decomposition of these matters? or, in other words, how shall we convert their insoluble into soluble genie—the direct food of plants.

"Every azotized constituent of animal or vegetable organism enters spontaneously into putrefaction, when exposed to moisture and a high temperature. Accordingly, azotized matters, (i. e. matters containing nitrogen in any of its forms,) "are the only causes of fermentation and putrefaction in vegetable substances.—(Liebig, p. 230.) "It is a well established fact that the production of nitre is not necessarily dependent on the presence of animal matter, but that, under the influence of porous materials, aided by alkalies or lime, the elements of air combine and form nitre and nitrates."—(Dana, p. 135.) From all which it appears necessary for the decomposition of vegetable fibre, viz: 1. A sufficient degree of moisture; 2. A proper elevation of temperature; and 3. The presence of some substance containing nitrogen—which may be either pure animal matter, animal manure, lime, (the principal alkaline earth,) ammonia, potash or soda, (the most important alkalies,) saltpetre, (nitre of potash,) ashes, (consisting of potash, soda and lime, common salt,) chloride of sodium.

The efficiency of these substances as decomposers, will probably be found to correspond somewhat with the order in which they stand; but in making from them a selection for his particular purpose, the farmer must of course be guided by circumstances. Whether his interests will be subserved at all by making compost, will depend upon his facilities for accumulating undecomposed vegetable matter. Whether it will quit cost to employ his stable manures in composts, will depend upon the extent to which he can secure them (solid and liquid,) in his cattle yard, or in his soil; and upon the cheapness with which he can procure other decomposers; and whether he shall make use of lime, or any one of the alkalies, or alkaline compounds, in preference to another, he will decide with reference to the comparative expense of these articles, and the idea he has of their comparative value.

If animal manure be decided upon as the decomposer, it should be employed in as green a state as possible, its decomposing power depending entirely on its nitrogen, which even an incipient fermentation will diminish. The proportion in which the manure is to enter into the compost should be determined by the species of the manure—it being recollected that urine, night-soil, hog dung, sheep dung, horse dung and cow dung, contain different amounts of the decomposing principle (nitrogen,) corresponding with the order in which they are here arranged. The common practice has been to allow one load of manure for two or three of vegetable matter; but it has been shown that this must depend on the quality of the manure.

It is equally evident that the proportion of vegetable matter should be regulated by the ease or difficulty with which it is likely to be decomposed, or, in other words, by the amount of labor it will require the manure to perform. If the vegetable matter to be decomposed be peat earth, or swamp muck, it should have a previous opportunity of parting with its tannin, acids, and excessive moisture, by exposure, for some length of time to the atmosphere.

The ingredients being in the requisite state, and the proportions of their admixture determined on, the pile may be constructed as follows: First, lay the foundation (of the form, size and depth desired,) with vegetable matter—cover this to the proper thickness with the manure, and thus proceed with alternate layers of vegetable matter and manure, till the pile has acquired a sufficient height, when it should be finished (in a somewhat conical form,) with a *thick* layer of earth, to prevent the escape of such volatile products as will be formed during the subsequent fermentation. If it be wished to hasten the process, lime, ashes or salt may be added for this purpose; and, in any case, a small addition of plaster will be useful, from its tendency to preserve the salts of the pile.

At the end of six or eight weeks the whole mass should be shoveled over, broken down and carefully blended together, and in case fermentation is still proceeding, a quantity of the finer earthy materials may be added. As soon as the work of decomposition is done, it should be removed immediately to the place of its destination.

"Weeds, leaves of trees, and all the succulent plants which grow so abundantly in ditches and waste lands, under hedges, and by road-sides, if cut or pulled when in flower, and slightly fermented, furnish from 20 to 25 times more manure than straw does. These plants carefully collected, furnish to the agriculturist an immense resourse for enriching his lands. The turf that borders fields and highways, may be made to answer the same purpose, by cutting it up with all the roots and the earth adhering to them, rotting the whole in a heap, and afterwards carrying the mass upon the fields."—*Chaptal, p.* 63.

To form a compost with lime, our late Agricultural Commissioner, (Rev. H. Colman,) directs to "raise a platform of earth on the headland of a field, eight feet wide, one foot high, and of any length according to the quantity wanted. On the first stratum of earth lay a thin stratum of lime fresh from the kiln; dissolve or slack this with salt brine from the nose of a watering pot; add immediately another layer of earth; then lime and brine as before, carrying it to any convenient height. In a week it should be turned over, carefully broken and mixed, so that the mass may be thoroughly incorporated. This was applied in the hill to corn. The crop was equal to that obtained by barn manure on parts of the field immediately contiguous."—*Fourth Report, p.* 347.

In forming a compost of peat and lime, Dr. Dana recommends to slack a cask of lime with so much brine as will just be saturated with a bushel of salt, and after 19 days blend it thoroughly with three cords of peat, shovel it over occasionally for six weeks, and apply it directly to the soil.—p. 197.

Of the use of clear brine in forming compost, there seems to be, among our most intelligent farmers, a considerable shyness. The result of Mr. Colman's observation on this subject was, that "in its application to peat composts, it assists in their decomposition, but its tendency is to expel their ammonia, to drive off the enriching parts ef the manure, and to reduce much of the remainder to an insoluble state. Here, however, its pernicious effects may be counteracted," (in para?) "where there is a sufficient covering of mould to absorb the gases, which would otherwise be dissipated in the air. Under such circumstances, its use may sometimes be advised."—*Fourth Report, p.* 349.

Mr. Timothy Benedict, of Pittsfield, in the fall of 1841, prepared a compost heap of swamp muck and lime, by mixing one bushel of the latter with a common load of the former, taken fresh from the bed. The last spring he applied this to a portion of his cornfield, a shovel full to the hill, treating the remainder of the field in similar way with common stable manure.—When examined by the Agricultural Committee in September, it appeared that the compost bed had been equally efficacious as the manure. The crop was a luxuriant one, and received the second premium of the Society.

The writer's experiments with muck and lime, however, both on gravelly and clayey soils, have proved entirely unsatisfactory; while from the use of the same quantity of muck in combination with ashes, he has derived the most signal benefit.

Ashes and muck, in the proportion of 4 or 5 bushels of the former to a common load of the latter, form a very valuable compost. If the muck be in a fine powdered state, the materials may be thoroughly blended together, and applied at once to the soil. But if the muck be of a strong texture, and contain much vegetable fibre, some time will be necessary for its decomposition. Leached ashes will answer the purpose equally as well as lime, if a somewhat larger proportion be employed.

To this compost too high a valuation can hardly be attached. A series of experiments (amounting to 29 in number,) instituted the past season, by the editor of the New England Farmer, has resulted in showing it to be second in the scale of composts, only to one "composted of both the dung and urine of cattle, horses, hogs and human beings, mixed with straw and muck," in a barn cellar.—See the Farmer, vol. 21, p. 157.

Finally, it may be remarked in relation to compost heaps, that the more heterogeneous their materials, the more rapid and perfect will be their decomposition; since, the greater the number of affinities brought into play, the greater will be the struggle between the particles of the mass to indulge their "likings and antipathies" in making election of their future (though it may be very temporary) associates. Let not the manufacturer of composts, then, be afraid of laying under contribution too many of the sources of animal, vegetable and mineral substances capable of being made to fatten his plants and to "gladden the soil."

Occasion will be taken, in concluding, simply to express the sentiment, that would the present race of cultivators of the soil but "come to the light" which science is shedding upon their profession, and in accordance with its teachings, put in full requisition the resources of fertility which every where abound around them, another generation would inherit from their hands a land of garden spots, and "shout the merry harvest home," on fields where now is only heard the sad, monotonous complaint of "hard, hard times."

Ashes on Corn.—I have been in the habit of using ashes and plaster on corn, and believe that ashes are worth the most, I thought last spring that I would ascertain the fact. I therefore left six rows through the middle of my field No. 1 without plaster or ashes; six rows do. No. 2 with plaster in the hill on the corn; do. six rows No. 3 with ashes in the hill; six do. No. 4 with ashes and plaster in the hill; six do. No. 5 ashes and plaster in the hill, and on the corn after the first hoeing: the quantity used was about a table-spoonful to each hill. The rows were long enough to contain a quarter of an acre, each 6 rows. The result was—

No. 1 had	22	bushels ears.
2	24	"
3	26	"
4	26	"
5	31	"

The field marked out three feet each way, and the cultivator used each way, and hoed twice. Thus you see No. 1 would yield at the rate of 44 bushels per acre, No. 5 62 bushels per acre, which I should think about an average with the

rest of the field. The soil is a sandy loam, mixed with limestone gravel.

I do not wish to be understood that plaster is of no benefit to land, for I believe it is very beneficial; I believe if farmers would apply their ashes to their land, it would net them nearer 100 per cent. than 10 or 12.—*Cent. N. Y. Farmer.*

THE RUST.

The very general injury to the wheat crop last season by rust, appears to have given new impulse to inquiries after its cause, and to have enlisted in the laudable work of discovery, many practical and scientific farmers. We are gratified at this, as the interest involved is one of deep moment to the farming community, it being certain that unless the cause of the disease should be satisfactorily discovered, that its remedy must ever remain among the hidden mysteries of nature. One set of farmers believe in the theory, that the rust is occasioned by parasitical plants, which fix upon the stalks and eat up those juices which should go to the perfection of the grain—another believes that it is owing to *plethora* or *overfullness*, whereby more juices are generated by the root-feeders, than can be healthfully taken up by the plant, and converted into straw and grain, and hence a cracking of the straw, and, consequently a loss of those juices which tend to perfect both the straw and kernels of wheat.

Now those who ascribe the disease to parasitical or fungus influence, as well as those who refer it to plethora, agree in one thing, that this *disease* always occurs under a peculiar condition of the atmosphere, just before the time of ripening. This is admitted by both parties.—The one contends that the moist, foggy and sultry condition of the atmosphere, tends to encourage the settlement of parasites upon the stems of wheat, and their consequent taking root and growth, to the total abstraction of the pabulum of both stem and grain, and that this is the primary *cause* of the malady. The believers in the doctrine of plethora, view the presence of the parasitical or fungus tribe as the *effect* and *not the cause* of disease: that the exudation of fluid through the cracks, superinduced by a too exuberant flow of sap from the roots, attach the parasites to the stalks, where, in the glutinous pabulum which escapes from within and forms on the outerside, they not only find a safe lodgment, but food withal to sustain their growth—and that this state of over feeding is produced by the atmospheric cause to which we have alluded, it operating to bring about a superabundant supply of nutriment, thereby incapacitating the growing plants from healthfully digesting it, or of giving out aliment, in due proportion, to the organs requiring it.

The believers in the fungus doctrine, maintain that the seeds of this parasite take root on the straw and extract their sustenance from within, —while those of the plethoric faith, believe that before there is any lodgment of those parasitical enemies, the food is already prepared by the bursting of the stem and exudation of the sap, the which forming on the *outside*, supplies the enemy with the sustenance on which he is nurtured into disease.

We have thus stated the two theories, and would ask gentlemen who may engage in the laudable work of searching into the cause of this disease, to let their observations be thorough. The character of the soil, its situation and exposure, mode of preparation, kind of manure used, state of the weather, period when the rust may first make its appearance, its changes, the time it may take to perfect its evil work; whether the straw becomes cracked before the rust makes its appearance on the surface; if so, whether its color is light on its first appearance and becomes discolored subsequently to the straws being affected by the rust, and at what period the parasites are discernible. It would be well too, to mark those spots where the rust may *first* show itself, so as to ascertain whether the decomposition of the manure, if any may have been used, or clover, if a clover ley had been turned under, had been carried on to greater excess, than on those parts where the rust had not appeared so early. By carefully noting such phenomena, the observing farmer would be the better enabled to make up an intelligent opinion as to the true *cause* of the disease, than he could do, by quietly looking on and awaiting its fatal result. It is by watching the symptoms of human disease, in their every form, that the skilful physician is alone enabled to determine to what type to refer it, and by which he is enabled to point out and exhibit his counteracting remedies. Without this diagnostic supervision and philosophical inquiry, he would neither be able to determine the nature of the disease, nor make the appropriate use of remedial means—all his efforts would be failures; or at all events, should they prove successful, would be altogether accidental; for unless you first understand the nature of the disease, know what organs are impaired in action, and how impaired, it is groping in utter darkness to attempt their restoration to healthful volition.

Before the nature of the Typhus was understood, we have seen the patient relapse into syncope from the moment that the vein of the arm was opened, and the pulse sink under the loss of the most trifling quantity of blood, so that its motion became so thread like, as to be recognized with difficulty by the pressure of the most delicate finger—and we have seen the same patient, on the prompt tying up of the arm, and the administration of a potent stimulating drink, rouse into sensibility, and the pulsation so quickened in action, and filled in volume, as would, in any other disease, have justified the free use of the lancet—but in this, as the experience just related indicated, it would have proved fatal. Here the medical gentlemen found it imperiously necessary to observe the symptoms, study the nature, and contemplate the effects of the disease, and it was only after the most patient and searching investigation that they were enabled to adopt their sanative appliances; and we hold it, that it is equally necessary for farmers to bestir themselves in well directed observations, as to the nature of the rust —they must watch its appearance with eagerness, examine every phenomenon the disease may present, with coolness and discrimination, and by making proper deductions from the premises which may be presented, they may find out the *cause;* that once ascertained, and a remedy will be of easy discovery and application.—*American Farmer.*

SHEEP IN THE SOUTH.

Important Facts.—In Chester District, S. C., there is a gentleman who has been breeding sheep for 30 years. He was lately written to for information on the subject by one of our subscribers—and he replied at considerable length. This gentleman's experience sustains the opinion heretofore expressed by us, that this is the very country for sheep. An impression prevails quite generally among Mississippians, that sheep and wool will deteriorate in our climate; and this deters many from entering with spirit into sheep husbandry.

To correct this evil and erroneous impression, we mean to leave no effort untried. We therefore ask pardon for taking an extract from a *strictly private letter*, from the gentleman in South Carolina, above mentioned. He is a man, as we have said already, of 30 years experience in sheep-breeding—of fine education—and of extensive observation, having traveled in much of the best portions of Europe. He is, withal, a practical as well as a scientific farmer, attending, in person, to the operations on his own farm. His word, then, is *authority* on this subject, and he says:

"The *quality of wool will not deteriorate in the South;* and with proper care, can be preserved *as pure* in the South as in the North. I have some merino ewes and wethers, a cross of the Escurial and Guadaloupe breeds, *now giving* as fine wool as the original stock, after breeding them in and in, upon this farm, without any change for 30 years."

It is unnecessary to explain why no new cross or new rams were used, if it be remembered that Chester is about 200 miles from the seaboard, and that there is no fine stock in that region. As to the *quality of mutton*, every lover of that delicious meat knows well that the mutton of the south is unrivalled; yet on this point also, we shall draw upon the above mentioned letter.

"The opinion," says the writer, "as to the inferiority of merino mutton is mere prejudice.—After the experience of 30 years, I can say, from my own taste, and the praise of it at my table, that it is equal to any mutton in the world—Welsh mutton not excepted."

The writer knew what he was speaking about —for he had bred South Down, Bakewell and Tunis.

We earnestly entreat our farmers to bear these facts in mind, and to pay more attention to sheep husbandry. If only a part bred buck, with a few ewes, were commenced with by every one that has the means, it would be an immense advantage not only to owners but to the country.—*South Western Farmer.*

The Compost Heap.—Begin with the arrival of the first favorable weather to gather materials for compost. Don't let a particle of matter capable of being converted into food for plants slip through your fingers. Manure is the farmer's capital—the wand by the favorable instrumentality of whose mystic and occult operations, he diversifieth the surface of the earth with the smiling beauties of vegetation, and causeth the waste places thereof to bloom, and the desert to blossom as the rose. "Give me a sufficiency of manure," said an elderly farmer to us, recently, "and I can work out a living in any country, and from any soil." The merchant must have capital—the mechanic must have instruction, materials and tools, and the farmer whose heritage is the broad fields and fertile valleys of his "mother earth," *must* have manure. It therefore behooves every one to be attentive to this grand point, and to gather up the means of enriching and rendering fruitful the soil, the products of which sustain his life.

No one who has not made the experiment will be able easily to appreciate the importance of attending, practically and *habitually* to the rules thus hastily laid down. Let every one, therefore, be sedulous in his efforts, and our word for it, he will never have occasion to deprecate the results.—*Maine Cultivator.*

CATTLE FOR THE SOUTH.

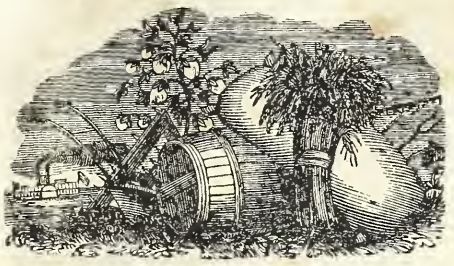
Messrs. Editors—I should be pleased to learn through the Cultivator, your opinion of the relative merits of the Devon and Ayrshire breeds of cattle, as best suited to the South. The Durhams will not suit this latitude, (Charlotte, N. C., and a light soil.) The object is principally butter and beef, and sometimes for the yoke.

A."

We wish to answer the question of our correspondent, in part, by asking another. Has "A." ever tried the Durhams, and satisfied himself they will not do in that latitude? The Durhams require good feed it is true, and no breed will do well without it. Devons and Ayrshires must have feed, or they will make neither beef or butter. The soil may be light, but if made rich it is precisely the soil for corn and lucerne, and if a little marl or clay should be added, clover would doubtless succeed admirably, and with these, Durhams we imagine would do well in any latitude.

If experiments properly made, have proved that the Durhams will not succeed, then for all the purposes mentioned by our correspondent, we should prefer the Devons. For beef and for the yoke, there are few if any breeds superior to the Devons, and if not in general equal to the Short Horns or Ayrshires for milk, still we have known some excellent milkers among them. The Devons are hardy, walk quick and lively in the yoke, and when fed make beef of exceilent quality. For milk or butter alone,

the Ayrshires would doubtless be superior to the Devons, and are indeed equalled by few breeds in this or any other country; but where the beef and aptitude to labor are to be taken into account, we think the Devons must have the preference.—*N. Y. Cultivator.*



WEDNESDAY, MAY 24, 1843.

BACK NUMBERS.—All new subscribers to the "Southern Cultivator" can be supplied with the back numbers.

SILK CULTURE.

We take great pleasure in giving place to the letter of Mr. ERNEST, (page 82,) and although we doubt not he only designed to have us make an extract from it on the subject of the culture of silk, we prefer to give it entire, because it affords us an opportunity to offer a few remarks on a subject of vital importance to us as the publishers of an agricultural periodical, and to urge the necessity of fostering our own domestic literature in every department of science and the arts. The feeling of patronising papers from home is too commonly indulged by most of our people, and applies to newspapers, periodicals, &c. &c. in every department of literature and science as well as agriculture. This is one of the most powerful obstacles at the South to every enterprise of the kind. We are too prone to regard those things which are most difficult to be obtained, and to possess something of a foreign air, as of the most value—while if the Southern people would bestow one-half the patronage on their home periodicals and papers that they do upon those abroad, they would place them above contingencies, and enable the publishers to present papers of equal merit in every particular. This feeling is strikingly illustrated in the patronage which is given by our planters to the agricultural periodicals of the North;—for although many, and indeed quite all of them, are conducted with singular ability, much of the matter which they contain is of little value to our planters, because inapplicable to our climate and productions. Nevertheless many of them indulging the feeling that nothing can be accomplished as well at home as abroad, prefer to patronise such papers to one exclusively devoted to Southern agriculture. We make no complaint at these things, for we expect no man to take our paper as a matter of courtesy; but we have observed for such a long series of years, the existence of this feeling throughout the country, that we could not forego the opportunity which the letter of Mr. Ernest has afforded us, to allude to a subject of such vital importance to the whole newspaper and periodical press of the South. The maxim, "*Charity begins at home,*" is a good one, and there is no business in which it should be more rigidly observed, than in the support to be extended to the press. Foster and cherish then your own domestic literature, and you will not only give a new impetus to the improvement of the age in morals, religion and science, but you will escape the reproaches so often heaped upon the South, of the want of an elevated standard of home literature.

With these remarks, (for which we shall doubtless be charged as being influenced alone by self-interest, but which we heed not,) we commend to the reader the communication of Mr. Earnest on the culture of silk, together with his sound, common sense, practical views upon that greatest of all evils, because generally the immediate and certain precursor of every vice, IDLENESS.

CURING SWEET POTATOES.

In this number we present to the reader the communications of two practical planters on the subject of curing this delicious esculent, both of whom have been very successful in preserving them sound until late in the spring. From our own observation, however, we incline to the opinion that the plan adopted by "A PLANTER" is decidedly preferable, and will be much more certain in all seasons to keep the potatoes sound, although we are well aware that many practical men prefer the heap after having tried the house. This, however, we are disposed to think has resulted rather from the defects in the construction of the house, than any other cause—an opinion which we have long entertained, and which the article of "A Planter" has materially strengthened. It is very apparent to our mind, and we doubt not will be to Mr. POWERS, that his house was entirely too close, excluding as it did that free circulation of air which "A Planter" regards so necessary to the preservation of the potato.

In reply to the enquiry of Mr. Powers, "whether any experiments have ever been made to test the practicability of making sugar from sweet potatoes," we reply, that none has come within our observation, nor have we any where seen or heard of a single experiment of the kind.

ANONYMOUS CONTRIBUTORS.

We should certainly feel obliged to our contributors to allow us to give their real names to our readers as the authors of their respective communications. We are not ignorant of the fact, that many men feel some delicacy in appearing before the public in any other than an assumed name; and however proper the indulgence of such a feeling upon some topics of discussion, it is decidedly improper in all communications pertaining to agriculture. We might give numerous reasons for this opinion—but it were needless. No planter hesitates to communicate, in his daily intercourse with his neighbor, the result of his experiments in every department of his business, and give them as his own experience—then why not let the public know to whom they are indebted for whatever is communicated through the medium of the press? Such a policy would certainly give the reader greater confidence in the experiment and he would be much more disposed to test its value when given over a real name than a fictitious one. We therefore hope our contributors will generally adopt the practice of giving their real names.

CATTERPILLARS.—An English agricultural paper says, that a gardener at Glasgow practices a mode of destroying catterpillars, which he discovered by accident. A piece of woollen rag had been blown by the wind into a currant bush, and when taken out was found covered by the leaf devouring insects. He immediately placed pieces of woollen cloth in every bush in his garden, and found next day that the catterpillars had universally taken to them for shelter. In this way he destroys many thousands every morning.

SALT FOR CUT WORMS.—We have seen it highly recommended in various agricultural publications to sprinkle salt plentifully over the beds in a garden, infested by cut worms. We have never tried it for this purpose, but should it fail to drive off the cut worms, it will act as a powerful stimulant to plants, and hasten them on to maturity more rapidly.—*Planter.*

ON THE ROTATION OF CROPS.

GENTLEMEN—A plain farmer who has been an attentive observer of the success he has met with in his career; of the influence of seasons, with the same crops, will, I fear, be led to believe much of the labor of those who write so much about the absolute necessity of rotation, poisonous excretions of plants, &c., might have been saved; in reality, he believes the most of it is utterly futile. That soils will deteriorate, there is no question, even if there be rotation; that manure would be advantageous we doubt not; but there has been so much said about this matter, that it tends to keep still farther off the incredulous. I would therefore propose a medium course, and point out some advantages that many have seen and will appreciate. But first, we will examine our natural forests, where the white oak, and sweet gum, &c. have grown for ages, without rotation, without the poisonous excretions preventing their growth, to the age of 147 years, if the rings of the growth of the white oak are a criterion of age. We find in our forests, the land to improve, by a continued fall and decay of the leaf, notwithstanding the crop is yearly made, and is continuous. We also find fence rows to become enriched, in a surprising degree, (to the careless observer) notwithstanding it produces a yearly crop of grass and weeds; and yet here is no rotation nor would we suppose poisonous excretions.—We know that in some of the great wheat growing portions of our country, that wheat has been grown consecutively for almost half a century. We know that fields in this south western country have grown cotton for years and years—and yet we are told of rotation and poisonous excretions. Sweet potatoes, cow peas and pinders, will undoubtedly enrich land, though planted for a series of years, and though I have known the two first planted several years on the same land, I heard of no decrease in product. The question then is, how can we imitate nature, and yet obtain the advantages of culture? This will bring me to the medium course I propose to point out, and at the onset will show what I said, many have seen and will appreciate. After having planted a field two years in cotton, a crop of corn can be much easier cultivated, owing to the necessity of keeping the land clean; and if the same labor be given to the corn as usual, a better crop is the result; their interest would point out to plant corn; though when cotton be changed, it is much more difficult of cultivation. If after corn, oats be sown, and allowed to be fed off on the land, or if cut, and stock not permitted to graze—the ensuing year if in corn or cotton either, will be better—these are all facts. And the advocates

of the rotary system will claim it as "a feather in their cap"—but let them look at the returns made some years since, published in the American Farmer, I think, from a small piece planted in wheat, which astounded all farmers around there—I cannot now refer to page and volume as I forget*—but it was owing to an ample return made to the land of stable manure. I would then say to every farmer, give your land food, suited to its digestive organs, if you would expect it to feed you in return. This may be easiest done, by a change of crops, and I doubt not every judicious farmer will adopt it to a greater or less extent. Many will ask why object to rotation and yet advise it? My reason is, that we are told a continued succession of crops is ruinous, and rotation beneficial; whereas, there are many who think as the old coffee drinker said of coffee—"If it is a poison, it is a very slow one, for I have been using it 70 years,"—and consequently pay no attention to what is their interest. I verily believe, if a field of good lively level land, were well cultivated, all the stalks and seed ploughed in yearly four to six inches deep, that it would improve in quality and yield for a century, and I appeal to the woodlands and fence rows and briar patches, for proof. We cannot imitate nature, in keeping ground shaded, and taking nothing off—but I believe the culture, if properly pursued, would come so near it, that there would be improvement. I am an advocate for rotation, and urge it, for the reason assigned, not on account of poisonous excretions at all—which sounds to me very much like forcing a child to tell the truth, least the devil catches him, rather than inculcating into him the intrinsic merit of truth, its beauty, and if no other reason, the interest he has for so doing.

The great desideratum of farming I look on it is to make the most out of one's labor—and to do this effectually, we should make it a primary object to endeavor to improve the soil, for plague and pestilence or disasters may sweep off the gain if taken from the land, but if returned to mother earth, she indulgently returns us twofold. I would then define good farming to be, a steady improvement of the soil, with the greatest yield. Nor do I by any manner of means yield to any man a preference of being a "best farmer," because he adds the fastest to his property, because he may scratch on and waste 10 to 20 thousand dollars worth of land, to buy 10 to 20 thousand dollars worth of property, whereas his neighbor has but half or only one-third as much property, and has kept his land and stock, &c. &c. up in a condition to sell for prime cost, even at a moment. This has been unfortunately the mode of judging in all our slave holding country, which has brought us to the necessity of manuring or rotation, if we would do as well as we have done.

In connection with manuring or rotation, I would urge the great advantage of thorough deep ploughing—I mean by this, that every particle of earth be turned over as early in the year as is possible, from 4 to 6 inches deep; believing from trials made for the three past years, that deep ploughing will, unaided, give a very handsome return. I did sow corn last year, on the same soil precisely, that yielded from five to seven bushels more per acre, than on land some three to five years later in cultivation—the only difference was deep and thorough ploughing for two years—on which I will plant cotton this year, and expect a yield of 1 to 200 lbs. per acre more, it being old land on which some eight or nine crops of cotton have grown out of thirteen or fourteen.

W. M. PHILIPS.

Tennessee State Agriculturist.

*Since writing the above, I have referred to my bound volumes and files of American Farmer, and find the crops of wheat grown on the same land for "five successive years" was by "Adam Wharm, Esq. of Elkton, Md.. On the 276th page of the present volume, the editor remarks, there are two features about Mr. Wharm's culture that go to astound us, "such heavy crops" and the "success" attending his using "stable manure." I allude to this case in point, particularly, because there was a succession of the same crops, a yield that even for one year was very great in that country, and there was manuring.

AGRICULTURAL HYMN.

Great God of Eden! twas thy hand
That first clad earth in bloom,
And shed upon the smiling land
Nature's first rich perfume.

Fresh at thy glance the flowers sprung,
Kissed by the sun's first rays—
While plain, and hill, and valley rang
With life, and joy, and praise.

Gods of the clouds! thy hands can ope
The fountains of the sky,
And on the expectant thirsty crop,
Pour down the rich supply.

The farmer, when the seed time's o'er,
Joys in the mercies given—
Thinks of thy promised harvest's store,
And smiling, looks to heaven.

God of the sheaf! to thee alone
Are due our thanks and praise,
When harvest's grateful labor's done,
On plenty glad we gaze.

Then shall our thoughts on Heaven rest,
Thy grace we will adore,
And thank that God, whose money's blest
Our basket and our store.

Selected.

THE TIMES.

The low prices of agricultural productions, and the severe pecuniary embarrassments of the present time, together with the slight prospect of improvement for the future, have caused a feeling of despondency among many farmers which is much to be regretted, and a little reflection will show is very unwise. It is true that the prices of produce offer but little reward for labor, and the prospects for the future are by no means flattering; but what then?—shall we settle down in gloomy despondency, and resign ourselves and families to inglorious poverty and ignorance, while Nature and Providence, and the wonderful discoveries of the age call upon us to put forth new efforts, and awaken new energies of the mind—to call in the light of science to our aid, and combine it with experience, skill and industry?

When wheat was $1 50 and corn $1 per bushel, pork and beef $5 per 100 lbs., and other things in proportion, the most unskilful and negligent farmer could hardly fail of making profit, and *then*, if ever, was the time we could best dispense with the aid of science and agricultural experience. But now, with the increasing competition of the west, and the prospect of continued low prices, *is the very time* when every farmer has need to AWAKE, and avail himself of all the knowledge and experience, and all the improvements and discoveries which the past has developed. In short, now is the time when the very perfection of art should be combined with science and sagacity, in order to ensure success and profit in agriculture.

The farmer has now more than ever before, need to understand the nature and condition of his soil, and the best means of renovating and enriching it; the nature and operation of mineral, animal and vegetable manures, and their adaptation to different crops; the extent to which labor saving machines can be introduced into his business, and, in short, *how to produce the most and the best* of every thing with the least possible expense and labor.

How mistaken, then, that policy which induces farmers to deprive themselves of the means of information, from motives of pretended *economy!* Thousands of farmers, the past winter, refused to purchase a book, or even to subscribe for a paper devoted to their interests, because, forsooth, "the times were so hard that they must practice economy!" Out upon such economy! we say. It is like self-righteousness, the more you have of it the worse you are off. These men have spent their long winter evenings and stormy days moping in the chimney corner and whining about hard times, while they ought to be storing their minds with science and useful knowledge, thereby increasing their powers and means of success. And now reader, if "thou art the man," we beg of you to reflect on this subject, and see whether you are practising wise economy, and if thou art not the man, carry this paper to your neighbor and ask him to consider the matter, and give you his opinion.

New Genesee Farmer.

PROPER AGE FOR HEIFERS TO BRING CALVES.—A Roxburg subscriber asks our opinion as to the age for heifers to bring their first calf. He suggests that we injure our stock by letting the heifers bear too early, and that three and a half or four years would be a better age than an earlier one.

We think if the object is to raise large cattle the heifer should come to her full growth before she is admitted to the cow family. But if the great object is milk or butter—if it is desirable to raise the greatest quantity possible in proportion to the weight of the cow and to the food she consumes, the heifer should come forward early. She should have a calf at the age of two, or two and a half, if she has been well kept. Her milk vessels will then be large in proportion to her limbs. Small cows almost always give more milk, in proportion to size, than large ones.

Massachusetts Ploughman.

AUGUSTA MARKET.

TUESDAY P. M., May 23.

Cotton—Our market remains quite inactive. The transactions since the accounts have been very light. A few sales have been made at a decline of from ⅛ @ ½ cent from the highest rate. The quantity offering is very limited, and although our stock is large, not more than one-third in store is on planters' account, the balance is held by our home speculators.

Money—Exchange on all the northern cities, Savannah and Charleston is abundant at par. Central Bank notes are in good demand at from 18 @ 20 ℔ cent discount, and a large amount may be sold at a less rate than our lowest figures. State 6 ℔ cent Bonds are much enquired for. Alabama bank notes can be sold for 15 ℔ cent discount.

CONTENTS OF THIS NUMBER.

	PAGE.
Curing Sweet Potatoes; Mode of stopping Gullies	81
Culture of Silk in Georgia; to cure Butter	82
Mr. Foote's Prize Essay, concluded	83
Ashes on Corn	85
The Rust; Sheep in the South; the Compost Heap; Cattle for the South	86
Silk Culture; Curing Sweet Potatoes; Anonymous Contributors; to destroy Catterpillars; Salt for Cut Worms; the Rotation of Crops	87
Agricultural Hymn; the Times; Proper time for Heifers to bring Calves; Augusta Market	88

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SOUTHERN CULTIVATOR.

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COMMUNICATIONS.

DECATUR COUNTY, GA., May 15, 1843.

Messrs. JONES—I have been sometime thinking of sending you some of my ideas in a crude state as they are, for you to refine them, but as I write under a fictitious name, I could not well afford to pay the postage and then not see my name in print; but after seeing your suggestion of the 31 instant, for planters to send in their plans for keeping sweet potatoes, I could with stand the temptation no longer, and as I have been a good potato grower, keeper and eater, I will give you my plan for making and keeping, which differs from Mr. McKinley's some. I think mine the better way, as I cannot conceive how he gets his potatoes out of the ground after he makes them, which he tells us nothing about. But to the text.

In the last of February or first of March, with a good season in the ground, I break up well, then lay off rows four feet apart, and throw up a bed of four furrows, with turn plow, same as for planting cotton, only I am more careful to bed as high as possible; then, after first rain, run a scooter furrow in middle of bed and drop the potatoes in it from 12 to 18 inches apart, and throw up with turn plow as before. When up, side with scooter or coulter, and throw up balance with turn plow; afterwards use the turn plow altogether until the vines run so as to be in the way too much, then, when a good season is in the ground, draw up the earth under the vines so as to make a tolerable ridge, and you will have a mellow bed, and the the potatoes will be so deep in it as not to be injured by drouth worse than the surface culture, with the advantage that you have the mould thrown next the potatoes, and a ridge to plow down to get the sweet things, which do with a long scooter. If there is no danger of frost, let them lie in the field all night to get cold. Have an inch or two of the surface scraped off at the place of banking, so as to form a circular ridge on the out edge, and fill with potatoes—making the hill as sharp at top as the potatoes will lie. Lean corn stalks, clear of shuck, cut the right length, so as to reach from the ground to top of hill.—Lean them up from six to eight inches apart at bottom, so as to keep the bark from the potatoes. Cover with pine bark, and then with earth the thickness of the breadth of a hoeblade, laying it up with the edge of the hoe next the hill. Have the bark so as not to reach beyond the top of the potatoes, which will leave an opening of near a oot in diameter at top, for the escape of the heat while going through the sweat. Cover the top with a piece of bark, leaving it in its natural shape, (concave side down,) to turn off the rain, and a little dirt on top of it to keep it there. There are but two months out of the twelve but I have potatoes, and not a few kept for a rarity, but as many as my negroes and all will destroy, by following the modus operandi above stated. If you think it worth a place in your Southern Cultivator, after pruning and pointing, give it, if not, throw it in the fire, as I do not wish to see any thing bad (not even my own) in it.

Mr. McKinley's theory of mixing earth with potatoes, I think is better in theory than pactice. I have not a doubt but they would keep well, but it is a well known fact that potatoes never sweeten until they are taken out of the earth and put where they keep dry—the dryer you keep your potatoes the sweeter they will be.

I have tried pine straw instead of stalks in banking, but it retains too much of the moisture generated in the bank, and causes the potatoes to rot. I am of the opinion that pine sticks split small, would be better than stalks to lean around the bank.

Yours, &c. AGRICOLA, JR.

P. S. To keep beef fresh for eating, sprinkle it over with corn meal and hang it up, and you need not fear the flies. As simple as it is try it.

CRACKER'S NECK, GREEN CO., GA., May 15, 1843.

Messrs. JONES—In the last Cultivator I discover an answer to an enquiry made by Mr. Penniman of Col. McKinley, of Lexington, as to the best method of keeping potatoes through the winter, and as it seems that the Colonel's modus operandi proved ineffectual, I will give you my mode, which has never failed in one instance with me, last winter (which was very fatal) not excepted.

After digging my potatoes, I raise a mound of loose earth, say some three or four inches above the common level, upon which I pile my potatoes as snug as possible, say 40 or 50 bushels to the bank, more or less, it matters not. I then cover them completely with corn stalks, placed straight from the base to the top of the hill, and cover all up with about three inches of earth. Some leave air holes at the top, but I find, from experience, that it is best to prevent all accession of air to the potato.

I like Col. McKinley's mode of raising them very well, and have adopted it this year. I see no reason why it should not succeed admirably. I have generally planted in the common way, and have raised enough to last the year through. I have now plenty of as fine as I ever saw.

My method has been, at the opening of spring to raise my potatoes from the banks above described, and sun them until perfectly dry, and then place them in an upper dry room. They have always kept well and retained all their good qualities during the summer.

Respectfully,

JOHN D. COPELAND.

RESPONSIBILITIES OF AMERICAN WOMEN.

The succes of republican institutions, as is conceded by all, depends upon the intellectual and moral character of the mass of the people. If they are intelligent and virtuous, democracy is a blessing; but if they are ignorant and wicked, it is only a curse, and as much more dreadful than any other form of civil government, as a thousand tyrants are more to be dreaded than one. It is equally conceded, that the formation of the moral and intellectual character of the young is committed mainly to the female hand. The mother forms the character of the future man; the sister bends the fibres that are hereafter to be the forest tree. The wife sways the heart, whose energies may turn for good or for evil, the destinies of a nation. Let the women of a country be made virtuous and intelligent, and the men will certainly be the same. The proper education of a man decides the welfare of an individual; but educate a woman, and the interests of a whole family are secured.

If this be so, as none will deny, then to American women, more than to any other on earth, is committed the exalted privilege of extending over the world those blessed influences which are to renovate degraded man and "clothe all climes with beauty."

No American woman then, has any occasion for feeling that hers is a humble or insignificant lot. The value of what an individual accomplishes, is to be estimated by the importance of the enterprise achieved, and not by the particular position of the laborer. The drops of heaven which freshen the earth, are each of equal value, whether they fall in the lowland meadow or the princely parterre. The builders of a temple are of equal importance, whether they labor on the foundation or toil upon the dome.

Thus, also, with the labors which are to be made effectual in the regeneration of the earth. And it is by forming a habit of regarding the apparently insignificant efforts of each isolated laborer, in a comprehensive manner, as indispensible portions of a grand result, that the minds of all, however humble in their sphere of service, can be invigorated and cheered. The woman who is rearing a family of children, the woman who labors in the school room, the woman who, in her retired chamber, earns with her needle, the mite which contributes to the moral and intellectual elevation of our country; even the humble domestic, whose example and influence may be moulding and forming young minds, while her faithful services sustain a prosperous domestic state—each and all may be animated by the consciousness that they are agents in accomplishing the greatest work that was ever committed to human responsibility. It is the building of a glorious temple, whose base shall be co-extensive with the bounds of the earth, whose summit shall pierce the skies, whose splendor shall beam on all lands; and

those who hew the lowliest stone, as much as those who carve the highest capital, will be equally honored, when its top stone shall be laid, with new rejoicings of the morning stars, and shoutings of the sons of God.—*C. E. Beecher.*

Whether rich or poor, young or old, married or single, a woman is always liable to be called to the performance of every kind of domestic duty, as well as to be placed at the head of a family; and nothing short of a *practical* knowledge of the details of housekeeping, can ever make those duties easy, or render her competent to direct others in the performance of them.

All moral writers on female character, treat of domestic economy, as an indispensible part of female education; and this, too, in the old countries of Europe, where an abundant population and the institutions of society render it easy to secure the services of faithful domestics.

All female characters that are held up to admiration, whether in fiction or biography, will be found to possess these domestic accomplishments, and if they are considered indispensable in the old world, how much more are they needed in this land of independence, where riches cannot exempt the mistress of a family from the difficulty of procuring sufficient aid, and where perpetual change of domestics, renders perpetual instruction and superintendance necessary.

Since, then, the details of good house keeping must be included in a good female education, it is very desirable that they should be acquired when young, and so practiced as to become easy, and to be performed dexterously and expeditiously.

The elegant and accomplished Lady Mary Wortley Montague, who figured in the fashionable, as well as the literary circles of her time, has said, that "the most minute details of domestic economy become elegant and refined, when they are ennobled by sentiment;" and they are truly ennobled when either from a consideration for a parent or love to a husband. "To furnish a room," says the same lady, "is no longer a common place affair, shared with upholsterers and cabinet makers, it is decorating the place where I am to meet a friend or a lover. To order a dinner is not merely arranging a meal with my cook, it is preparing refreshment for him whom I love. These necessary occupations, viewed in this light by a person capable of strong attachments, are so many pleasures, and afford her far, far more delight than the games and shows which constitute the amusement of the world."—*Young Ladies' Friend.*

On the Cultivation of the Raspberry.—The plants are frequently set out in light and poor soils, crowded together, left untrimmed, choked up with a profuse growth of weak stems, and what little fruit they produce is nearly dried up, from the arid situation in which they are placed. On the contrary, in cool, deep and moist soils, in a sheltered and partially shaded place, the plants throw up suckers to the height of six or eight feet, and produce a profusion of large, handsome, and well flovored berries. So well assured are the most eminent English cultivators of the raspberry of its love of a cool and moist soil, that some writers have strenuously recommended the use of bog earth and rotten leaves, in the place of the richest loam. We are well assured that the many complaints which are made of the meagre produce of many raspberry plantations may be attributed wholly to the light and droughty soils in which they are often planted.

A cool aspect is of material consequence, and to secure this the north side of a fence or trellis, which will form a screen from the sun, is the most favorable: on the north side of a shrubbery or row of fruit trees is also a suitable place. If neither of these situations is to had, an open spot in the garden may be chosen, always being careful to avoid the south or east side of a fence. A temporary shade may be effected in the open garden by planting a row of running beans on the South side.—*Hovey's Mag.*

CORN STALK SUGAR.

It will be recollected that we published a communication in November last from Mr. W. C. Rogers on the subject of the manufacture of Sugar from Corn Stalks. The letter below from the same source further explains the process, and more fully describes the mill used for extracting the juice from the stalk:

Caledonia, Henry County, Tenn.,
March 24, 1843.

Dear Sir: I have received various letters asking information about the construction of Mr. Vaughan's Mill for making sugar from Corn stalks, the manner of cultivating the corn, process of manufacture, &c. To save the trouble of future enquiries, I send you this communication, which you will oblige me by inserting in the Banner.

The mill is composed of two upright rollers, one 58 inches in length, the other 46, which are secured by a strong frame 8 feet long, 3 feet wide and 30 inches high; 17 cogs on one roller work in an equal number of cogs in the other, and are moved by a sweep; the short roller has a body 24 inches long, 20 inches diameter, a neck piece at the top to be inserted in the frame 8 inches long, 10 inches diameter, a cog space immediately under the top neck 6 inches long and 17½ inches diameter, and a neck at bottom 8 inches long, 10 inches diameter, making its entire length 46 inches. The long roller is of the same dimensions, with similar body, neck piece and cog pieces, with the exception that 12 inches are added to the top neck of the long roller for the insertion of the sweep.

In grinding, the stalks are passed by hand between the rollers, and the juice is squeezed out on their passage. If not sufficiently pressed out on the first passage, they are returned a second time between the rollers. The juice is caught by the bottom piece of the frame, which is three feet wide like a platform and sloping on one side so as to make it run out into a vessel placed there for the purpose.

After the juice is obtained, it ought not to stand more than an hour for fear of fermentation. It is then placed over the fire and as it begins to boil carefully skimmed. When boiling the scum should be rapidly removed as it rises.

If some of the syrup can be taken between the thumb and finger and when moderately cool a half inch or inch long can be drawn, it is thought boiled sufficient. If you wish only to make syrup it is not boiled quite so much. To make it grain into sugar a few spoonfuls of limewater has been recommended.

The only fixtures used by Mr. Vaughan in boiling were a common ten gallon pot and three other pots of about the same size. The process is neither intricate nor tedious. Corn standing in the field may be cut, ground up and converted into elegant syrup in three or four hours.

From the foregoing description it will be seen that the principle upon which the mill is constructed is the same as that of Mr. Webb's of Delaware, as described in the June number of the Albany Cultivator for 1842, with the exception of the dumb returner or third roller, which is not found in Mr. Vaughan's mill. The process of boiling and manufacture is the same.—Neither the plan of the mill or process is new; mills of a similar description have been used by planters in the lower part of Georgia for making sugar and molasses for the last twenty years. To Mr. Webb of Delaware, is, however, due the great credit of substituting Corn stalks for canes.

Is it profitable? is a frequent question. Mr. Vaughan thinks he can make sixty gallons of molassess per acre, which, at present prices retailing in this neighborhood, would yield a profit of 25 or 30 dollars.

When the manufacture becomes common in the West, such is our unbounded capacity for making corn, of course the profits would be nominal. But if only made for family use, it will be a great saving, and become, when we get in the way of making plenty of molasses, an actual blessing to children and negroes. Three days are sufficient to grind up and make 60 gallons of molasses, and the work will come on at a season when the time can be easily spared. The refuse juice is alone valuable for making a most grateful beer and good vinegar.

As to making sugar, Mr. Vaughan failed in the last year, but will plant 15 acres the present spring and "try again." The supposed causes of his failure I gave you in my communication of October last.

The corn I had like to have forgotten to mention, is the common sort of corn, planted and cut in the same manner as any corn, with the exception of removing the shoots as they appear. Mr. Vaughan cut his corn as the fodder began to ripen, at which time he thought the juice would be most apt to be matured; of course he stripped off the fodder before he cut it. Cost of Mill, $6.

SUGAR FROM CORN.

To the Editor of the Ohio State Journal:

Sir—When the fact was announced that corn stalks were quite equal to the cane for the production of sugar, it was natural to suppose that our farmers would immediately avail themselves of so great a discovery to increase the profits of their labor. But we find that nothing but ocular demonstration will induce people, in such times as the present, to engage in any new enterprise, however feasible of promising beneficial results. It was with that view I put up a mill last season for the purpose of making a trial on this subject, and the issue of my experiments prove all that had been before stated to be true, and more, for the fact was established to my satisfaction, that sugar, or at any rate, first rate molasses, may be made from corn stalks, after the corn has come sufficiently to maturity to be fed to swine.

I found that corn stalks contained vastly more saccharine mattert han I had supposed possible. The expressed juice indicated nine degrees of the sachrometer, and one gallon produced more than one pound of sugar, which is more than is usually made from the Cane.

I obtained last season one hundred and fifty pounds of molasses, but only a small part of it granulated, owing to my letting the ears of corn ripen too fully on the stalk, or to an imperfect method of manufacture, or to both. But that which did not granulate was an excellent article for family use, of a most delicious flavor, and, as we found by experience, very wholesome.

I have no means of knowing how much sugar can be obtained from a given quantity of ground, but I do know that the product will be abundant, and I firmly believe that the time will soon arrive when this indispensable article of domestic economy will be produced among us.

The mill that I used to crush the stalks and extract the juice, was made somewhat like a cider mill—the rollers are eighteen inches in diameter, (two feet would be better,) twenty inches in length, made of wood and connected together with cogs; the gudgeons at the bottom are made of iron, two inches in diameter.

One horse turns the mill with ease. A wooden mill that any carpenter can make, will be sufficient for a whole neighborhood; but when the business is conducted upon a large scale, iron cylenders would be preferable.

In straining, clarifying and boiling the expressed juice, I designed to follow the directions of Mr. Webb, which have been so fully published that they need not be repeated. I made a mistake, however, and used too much lime, which is indicated in the sample I sent you. I am now of opinion that one spoonful of lime water of the consistency of thin cream is sufficient for a gallon of juice; this however can be best determined by experience.

The boiling was done in iron kettles hung over a fire, out of doors, and I found much difficulty in the burning of the syrup on the sides of the kettles, by which a part was decomposed and became like wax, and this again mixing with the whole mass undoubtedly tended to prevent crystalization. Molasses may be made in this way, but for making sugar suitable boilers

should be set in brick work so that the fire shall only come in contact with the bottom.

The expressed juice of the maize, like that of the cane, is impure when it comes from the mill, as a portion of the solid parts of the stalk necessarily mixes with the liquor in the operation of obtaining it, and these must be separated in order to ensure good results. The object of using lime is to effect that purpose and to neutralize the acid the juice is supposed to contain.

And here I will express an opinion that I have formed in part from observation, and that is, that if the expressed juice is suffered to stand a certain time in a large open vessel, after it comes from the mill, the heavier parts of the feculencies will fall to the bottom, and the lighter will float on the surface, and when the liquor is drawn off, it will be nearly free from impurities. Should this prove to be the case, a great object will be gained with little trouble; the only thing that can prevent success in this mode of treating the liquor, will be the commencement of fermentation—this I think will not occur in our climate, at the season we should make sugar.—Towards the latter part of my operations, I adopted the course above mentioned with my syrup: what I boiled into syrup in one day, I let stand to settle till the next before being made into sugar at all.

As to the method of planting corn for this purpose, I have not much experience. The small patch I planted last year was done late, so that it did not come to maturity; but I intend to plant some this year and have the rows about three feet apart, and drop the corn in drills from one to two inches apart.

And now, Mr. Editor, I must take the liberty to urge you to call the attention of your readers to this important matter as planting time is approaching, and there ought to be thousands of acres devoted to this culture this spring.

Yours, &c., S. BALDWIN.

Cattle and horses readily eat the refuse of the mill. By permitting it to cure and adding a little salt to the heap, it makes first rate winter fodder. Nothing, either of leaves, tassel or stalk is lost. All is saved.

NUTRITIVE PROPERTIES OF DIFFERENT CROPS.

Our estimate of the nutritive value of different kinds of food is generally of a very vague and indefinite character; the ordinary farmer can estimate the effect of different supplies only by long and close observation; and indeed the health and growth of his stock is liable to be effected by so many causes, over and above the food they eat, that the result of his observations, even when closely made, may be far from satisfactory. It would be a great thing then, if by chemical analysis we could discover exactly the properties of different kinds of food; in producing for market, no such investigation is required, the best test of a saleable product being its market price; but a farmer wants to know whether to cultivate an acre of land in potatoes, or carrots, or sugar beets, or whether old-fashioned Indian corn is not more profitable than any of them. He can calculate the expense of cultivation of each; he can estimate the quantity of product in each, and if he could ascertain the comparative nutriment of each, he could at once draw a thorough comparison between them.—Vegetable substances, it has been long known, consist, invariably, of certain constituents, as gluten, albumen, gum, starch, water, salts, &c. in different proportions. Some of these principles are known to be more, and some less, useful in supplying the animal economy: the gluten, albumen, &c. it is said are converted by the vital functions into *flesh*, whilst the gum, starch, sugar, &c. are only useful in creating *fat*. It would seem then, that we would have only to ascertain the proportions of each constituent in a given substance, which chemical analysis will always do, to tell exactly for what purpose it is adapted. Accordingly, scientific men, from time to time, have endeavored to obtain this estimate by analysis: but unfortunately not always with the same results. Indeed, we presume, that the constituents of a vegetable will vary, to a certain extent, with the climate and soil in which it is raised, and we presume too, that these constituents may, in a measure, be differently appropriated by the digestive organs of different animals. Moreover, so intricate and complex is the chemical action of compound substances, especially when subjected to vital action, that nothing can be predicted without an *exact* knowledge of *all* the constituents present in any given case. Although these circumstances, unfortunately, render the deductions from chemical analysis even more uncertain than those drawn from common observation, yet the use of both methods may lead to more certainty than could be obtained from the sole application of either. We give to our readers, therefore, the latest estimates of the celebrated French chemist, Boussingault, on some important points. He found that the nutrative properties of

100	bus.	beans	was	equal to	120	bus yellow peas.
100	"	"	"	"	191	" wheat.
100	"	"	"	"	200	" rye.
100	"	"	"	"	232	" barley.
100	"	"	"	"	240	" Indian corn.
100	"	"	"	"	1096	" potatoes.
100	"	"	"	"	1361	" carrots.
100	"	"	"	"	1446	" cabbage.
100	"	"	"	"	2383	" turneps.

Dr. Dana, of Massachusetts, has also lately made a comparative analysis of corn, ruta baga, and potatoes, from which he has deduced the following table:

	100 lbs of Corn.	Ruta Baga. fresh dug.	Potatoes. fresh dug.
Contain of flesh forming principles: gluten, albumen, &c.	1.26	1.	2.07
Fat forming principles: gum, starch, sugar, woody fibre, oil, &c.	88.43	13.	24.34
Water,	9.	85.	72.
Salts,	1.31	1.	1.39

For the growth of animals and the formation of flesh, it will be seen, that Dr. Dana places a very low estimate upon Indian corn; whilst he esteems it very highly for the formation of fat. Without drawing this distinction between fat and flesh, Boussingault estimates its nutritive properties infinitely above both potatoes and turneps.—*Southern Planter.*

CHARCOAL AS A MANURE.

I have had some experience in the use of charcoal as a manure, and fully concur with Mr. Hepburn in its being a valuable and durable manure; but whether it might not require so great a quantity of coal in order to increase the productiveness of the soil as to make it expensive, I have my doubts; but I am fully of the opinion that the coal dust left on the coal beds (or hearths, as Hepburn calls them,) and the dust or fine coal which may be found in large quantities about iron manufacturing establishments, and all places where there is dealing in coal, may be applied to profit as a manure.—The farm which I occupy was mostly cleared by coaling the timber, consequently these beds are numerous, and fourteen years I have tilled one or more fields, where there were more or less of those beds, and such places have never failed to produce as large crops as I could wish. These beds in consequence of the large quantities of fine coal left on the ground, and the dryness of the earth, produced by the fire or some other cause unknown to me, will not produce anything for several years, unless it is carted away; therefore in order to obtain a crop on any such places, and benefit other lands by the application of the dust and fine coal, carting becomes necessary. I applied two loads this season from a bed made last fall, and I think from the large growth of wheat straw produced where it was applied, and the present appearance of the grass, it is worth two-thirds as much as good stable manure. I have never suffered by the depredations of the corn-worm, where coal dust has been applied thoroughly as a manure, and as for its durability, there is no question; for, in my cornfield this year, there is one of those beds that was made twenty four years ago, and it has been either in grain or grass ever since. And did the rest of the field look as promising, I should be assured it would yield ninety or a hundred bushels per acre. I intend applying this dust thoroughly to my garden this fall, and if I thereby increase its productiveness, and destroy the habitations of worms, and other insects, that prey upon vegetation, I think I shall ba amply repaid for the outlay.

LEWIS EAMES.
Central N. Y. Farmer.

TANNERS' BARK.

Mr. EDITOR—I wish to inquire whether tanner's bark can be used as a manure? By favoring me with a speedy answer you will oblige,

Your's sincerely, CORTEX.

W———, March 10, 1843.

REPLY.—Bark fresh from the tan pit will destroy vegetation as readily as salt. If hauled into the cow yards, however, and suffered to remain a year or so, it will become valuable manure, and may be applied advantageously to soils of almost every kind. It operates mechanically, and is beneficial on lands naturally wet and viscid, and in which there is a superabundance or excess of clay.—*Maine Cultivator.*

Tan may be used fresh from the pit, if used sparingly, without doing any injury; if used in *excess*, it will, like salt, destroy vegetation. In moderation both are excellent manures. As an amender of a stiff clay soil, we know of nothing better than tanner's bark: when spread over cow yards or pig pens it is invaluable as an absorbent, and when, after a single season, it becomes mixed with the other substances it forms an excellent manure: when mixed in the following proportions, 200 bushels tanner's bark, 20 of lime and 50 of ashes, and suffered to remain a month or so in the heap, the mixture, after being turned over and thoroughly incorporated forms as good a manure as any farmer need desire to put on an acre of ground.—*Am. Farmer.*

ECONOMY IN FEEDING CATTLE.—Our worthy neighbor and ancient citizen, Mr. Jas. Boatwright, whose active mind scorns the repose so congenial to his advanced age, after a life of industry and usefulness, still finds pleasure in taxing his mechanical powers in order to be useful. He has recently invented, and has now in operation, one of the most complete and simple machines for grinding corn, either in the cob for feeding cattle, or for meal or grist, that we have ever witnessed in operation. The mill is formed with two common granite stones in an upwright position on a gudgeon connected with a wheel, to which is applied the power of a four horse steam engine that was formerly provided and is still used in his cotton gin manufactory for turning, and he is enabled to grind one hundred bushels of corn per day with the labor of one man to feed it! The whole is fitted up in the cellar of his gin shop. The corn and cob are both ground up together, and makes most nutricious food for cattle. By this process a saving of at least one third is made in the feeding of cattle. It is said to be superior to peas, and can be purchased at the mill for 37½ cents per bushel. Attached to the machinery is also another pair of stones which turns out as beautiful meal as we desire to use. Our fellow citizens will do well to avail themselves of the opportunity of purchasing this cheap food for horses and cows and corn meal for table use.

Columbia (S. C.) Chronicle.

SUBSTITUTE FOR CREAM.—Beat up the whole of a fresh egg in a basin and then pour boiling tea over it gradually to prevent its curdling. In flavor and richness this preparation closely resembles cream.—*Southern Planter.*

SALT YOUR COWS.—All cattle need more salt when they are first turned to grass than afterwards. Let them have access to it twice a week in May and June.

ADDRESS

Of Col. B. L. C. Wailes, (President,)

Delivered before the Agricultural, Horticultural and Botanical Society of Jefferson College, and a numerous assemblage of ladies and gentlemen, at Washington, Mississippi, April 23, 1843.

* * The first place in the primary production of those material objects suited to the wants of mankind, is assigned to the husbandman.—Contributing most largely to the necessities of all classes, he is the least dependent upon the labors or productions of others; and although this very independence may perhaps retard the progress of agriculture, by repelling or rejecting the adventitious aids of science, which are constantly accelerating and perfecting most other pursuits; still, the benefits conferred by agriculture, even in a rude and unimproved state, are so numerous and important, as to entitle its votaries to a high consideration, and insure them great respect. Few, it is true, are educated for planters, or receive that kind of mental culture the most suited to that pursuit. Many who pursue it, are learned to a degree calculated to adorn the most respectable and liberal professions; yet in their scholastic course, have gained little more, in reference to husbandry, than a few glimpses of pastoral life, gleaned from their early classics. Upon such, the influence of associations for the promotion of Agriculture, is not less salutary than upon the unlettered farmer. Nothing is better calculated to supply such defects of early education, and to stimulate a spirit of investigation and inquiry.

To a cultivated mind, imbued with science, how instructive, for example, is the contemplation of vegetable matter.

In every stage, from the gem of the seed deposited in the earth, the expanding leaves and opening flowers, to the maturing and ripened fruit, it excites surprise, and challenges admiration. In the season of returning life, when dormant nature, awakened from repose, reflects its cheerful smiles, warmed by the influence of the orb of day, the excited sap ascends. It circulates through innumerable fibres, courses thro' thousands of little tubes, or pores, too minute for the unaided eye, delicately, yet perfectly, organized and arranged, performing offices equivalent to veins and arteries in the human frame, extends through all the branches, and nourishes the unfolding buds. This circulation, or current, which in some plants can clearly be seen, with the aid of the microscope, forms the bark, and marks the age of trees, with a layer for every year. Banqueting in morning dews, the same warming and illuminating influence pencils a tint on every flower, and paints the ripened fruit. In this fluid, or juice, as various in color as in taste, the principal medicinal virtues chiefly reside. In some it is sweet; in others, acrid and corrosive, bitter or acid, aromatic or narcotic. The sugar maple, the cinnamon and the poppy, furnish some examples of these properties; whilst the dye-woods, the beet, and other vegetables, exhibit it in all the varieties of color. As a knowledge of the curious structure and wonderful functions of vegetable life is unfolded, the character and habits, the affinities and antipathies of plants understood, it may oft times be discovered that the prevailing system of treatment or cultivation, injudicious and attended by a wasteful expenditure of labor, in actually stinting and restraining their productiveness. A mind thus awakened and directed, will not rest content with observations on vegetable physiology alone. It will look further into the wide and interesting field of investigation, and explore the mysteries of Agricultural chemistry and geology, in quest of those laws and principles which must govern the various operations of the successful cultivator. To distinguish merely between a fertile soil and a poor one, will not satisfy such an inquirer. A thorough knowledge of the constituents of soils will be sought after, their properties and combinations investigated, and the proportions of the various elements of which these are composed, will best sustain, stimulate and mature the various plants, the objects of our cultivation and care, will be carefully examined. The very atmosphere in which they thrive, and the gases they inhale or imbibe, will be analysed. Chemical changes are continually going on in the materials in which the planter operates, and a failure to take advantage of them, from ignorance or neglect, occasions great losses. In proportion as the valuable or essential properties of the soil are taken from it, in its vegetable product, must it be restored in some form; and a knowledge of the best manner of applying and assimilating the requisite ingredients, and of promoting and regulating the proper chemical action, is among the most valuable acquirements of the the farmer. In such investigations, many of the most learned and judicious men of our age are actively engaged. At no former period has science contributed so extensively and beneficially to the cause of Agriculture; or has more important and valuable discoveries and improvements been made, than in the present day. That the abstruse and scientific principles from which these improvements have been deduced, should be understood, or even investigated by all, is not to be expected; nay, it is not necessary that they should. Many who deride such studies as idle and visionary, will nevertheless adopt, from the experience and practice of others, improved processes in cultivation and domestic economy, without troubling themselves with the rationale of their operation; and whilst loudly contemning the visionary studies of the scientific, be successfully, though unconsciously, demonstrating their value and utility—as much to their surprise, perhaps, as the plain farmer, who, whilst vaunting the merits of his favorite plough, (a miracle of perfection in his estimation,) found himself unconsciously ridiculing and undervaluing the studies and investigations in mechanics, of the very man who had invented and constructed it.

A system of cultivation, or some process connected with Agriculture, may sometimes be adopted by chance, or suggested by convenience. That such is the case, we have reason to believe. That it may not always be calculated to insure the best results, or have had its foundation on any known or tried principle or experiment which recommended it to use; yet it may become the prevailing system, almost universally adopted, and be long persevered in, with such tenacity as almost to preclude any modification or improvement. A discovery has recently been made, (I term it a discovery, for under the circumstances, it surely is little else,) which goes far to illustrate and establish this position.

The Cotton Plant has been cultivated in the Southern States for more than fifty years, and for a long period there has been no process more generally adopted and uniformly followed, than that pursued, in which the principle seems to be, to cultivate the greatest possible quantity of land in cotton to a given force. Now, a planter in Alabama, Dr. Cloud, acting on an opposite system, has endeavored to obtain from the smallest space the greatest product. The result of his experiment, the past season, 5989 pounds to the acre, is truly astounding, and being accomplished on land of inferior quality, originally of pine and black-jack growth, is the more so. From his statement, published in the Albany Cultivator, and copied into many other agricultural periodicals, it would seem that his system of planting and cultivation will ensure a product of near four bales to the acre; and although this may seem incredible, other experiments, on a smaller scale, it is said, have demonstrated that nearly double that quantity may be produced. A detail of the whole process, and mode of operation, by which this is effected, would doubtless possess more value than any thing I can say, did my space allow of it. It must suffice to state, that it proposes to restrict the cultivation of cotton to three or four acres to the hand, which will be sufficient to keep pace with the consumption, and to supply the demand, and at the same time greatly reduce the proportion of the inferior article, and to effect this at one-third of the cost, or the capital engaged in its production. The system favors the natural arborescent growth of the plant, and a more perfect development of its staple, which will greatly influence its market value. At a period like the present, when the production of cotton is so redundant, the price so depressed, the character and quality of the staple so greatly impaired, the system pursued by Dr. Cloud commends itself to adoptation with irresistible force. If we look forward to the future, what prospect of remuneration greets the cotton planter.

Admitting the East India experiment to be a failure, that no fear of successful competition exists in that quarter, still we see in the assurance of an increased production of our staple at home, fearful indications of a continued, if not a further depression of its value. View the active and earnest preparations making everywhere, to make good in the coming crop, by quantity, the reduction of price. See the wide alluvial plains on our borders, to what extent they have been reclaimed and brought into cultivation within the past year. Look at the middle and northern portions of our State, last year cheerless, desolate and abandoned, now filled by emigration—scarcely a plantation untenanted; all—all intent on cotton. Happily, we have learned wisdom enough in our adversity, to provide at home many of the necessaries of life; but the extent to which we are still dependant on foreign supply, in the circumstances of the country, is appalling.

The cost of horses and mules, farming implements, bagging and rope, pork and clothing, still required, forms a most formidable aggregate drained from our resources. It may be said that those articles are now cheap; yet do they not bear the same proportion as formerly, to our means of purchasing, or the value of our staple? Surely, it is time to seek out other sources of wealth, and new objects of industry.—Fortunately, few countries are more favored in this respect than ours, in its adaptation of soil and climate, to the production of many articles for which we have an ample demand at home. In the rearing of horses and mules, the growing of wool, the cultivation of silk, rice, indigo and tobacco, we have a choice of remunerating and profitable products, to divide our attention, with the production of our present staple.

The rice planters of the Carolinas and Georgia, are now accounted the most prosperous agriculturalists in the Union, and though this product may not be generally suited to our uplands, still we possess extensive tracts well adapted to its growth.

Silks, to the value of twenty millions, are annually imported into the United States. England imports nearly that amount of the raw material, and our own country is infinitely better adapted to its production than France, from which much of it is derived. It would prove the lightest and most lucrative employment we could adopt.

Sheep husbandry is rapidly increasing, and will soon form an important branch of industry. Tobacco and indigo, once the staples of the country, could be advantageously raised. Recent discoveries and improvements remove the objection to the latter, since the disagreeable and unwholesome process of manufacturing it is rendered unnecessary, a sufficient demand existing for the plant in its dried or cured state.

Many successful experiments have been made in the State of New York, and other sections of the country, in making sugar and syrup from the stalk of the Indian corn. It is better adapted to this purpose than the maple or beet, and it is thought, when the process is perfected, will not prove inferior to the cane itself.

With such resources, need the planter despond? Combining within the scope of his operations so many elements of independence, the exercise of prudence, industry and economy are only necessary to insure competence and prosperity. * * * * *

Though peculiarly suited to the care and nur-

ture of woman, she is not alone in her admiration of flowers.

Man, in the rudeness of his nature, may indeed deny the soft impeachment; and, "as outward life requires them not, ask wherefore were they made?" Yet, disguise it as he may, with the gentle Mary Howitt, his heart responds—

"To minister delight to man,
To beautify the earth."

It is useless to deny it, those fragile and fragrant gifts, so delicate in texture and beautiful in form, so exquisite in bloom and enchanting in sweetness, are too intimately associated with the purity and loveliness of woman, not to attract our regard, and command our admiration.

In all ages, and in all countries, where man has advanced beyond the savage state the beautiful gifts of Flora will be admired, preserved and cherished; and oft-times, with a yet holier and deeper feeling, will be reverenced as the smiles which Deity sheds on earth. Permit me, my fair auditors, to thank you, in behalf of the Society, for your attendance, and the interest you manifest in our success. Cheered and encouraged by your approbation and presence, our Fair becomes truly the Planters' Jubilee—a pleasant reunion of friends. On a former occasion, the conviction was expressed, that to your countenance and encouragement the prosperity of the Society was in a great degree to be attributed, and I now earnestly invoke a continuance of that interest, that active participation on your part in our operations, which cannot fail to add to the respectability and influence of the Society, and to insure its perpetuity.

Within the sphere of your household duties, many objects may be found, highly suited to exhibition and encouragement. The golden produce of the dairy—the fruits of horticultural skill—the useful web, and the finer tissues of the loom—the various articles fashioned by the needle, whether adapted to useful and economical purposes, or the more curiously wrought and tastefully executed objects of female ingenuity, need only be seen, to be approved, admired and emulated.

Coming from your hands, or as the result of your superintending and directing care, these will ever form the chief attractions at our Fairs, and whilst they claim our approval and admiration, we shall be stimulated in our appropriate departments to emulate your industry and endeavor to attain your skill. * * *

Southern Sportsman.

RECIPES.

To make good Hop Yeast.—To two quarts of water add a single handful of hops and three good sized potatoes, pared and sliced. Boil all together till the potatoes are done; strain the liquor on about one quart of flour; mash your potatoes and stir them in. When sufficiently cool, add not less than half a pint of yeast; let it rise and then set it away in a cool place, but do not let it freeze.

Graham Bread.—Take unbolted flour and pour on your wetting scalding hot; let it cool till about lukewarm, then add yeast enough to raise it. Knead and bake it as other bread.

Common Tea Cakes.—Take 3 cups of buttermilk, 1 teaspoonful pearlash and 1 cup shortening; roll and cut to suit your taste, and bake quick.

Yankee Pie.—Make cake as above; roll it into cakes the size of a common baking tin; when done, take off the top of the cake, and spread on apple sauce, sugar and butter; replace the top and it is ready for the table.

Johnny Cake.—Take 2 cups of milk, 1 teaspoonful of saleratus, 1 tablespoonful of butter, 1 do. of molasses; stir it thick with Indian meal, or one fourth flour and the rest Indian meal. Bake one hour.

Cough in Horses.—The boughs of cedar have been used with complete success. They should be cut fine and mixed with the grain.

LIME AS A MANURE.

I was a few days ago engaged in reading an agricultural periodical of some celebrity, and was rather surprised at the great variety of opinions made public through its pages, on the subject of lime as a manure. I have for some years believed that its action is as I shall hereafter describe it; and whilst I offer no objection to the views of others, and do not propose to enter into any controversy in favor of my own, I indulge a hope that when I add another to the numerous opinions on the subject, it will not be found to be the least worthy of belief, or most at variance with practical results.

It is understood to be one of the laws of nature, that when the principle of life has ceased to exist in organized matter, animal or vegetable, chemical action, till then suspended by the power of life, resumes its sway, the various parts of the organized lifeless body, are acted upon by light, heat, air and moisture; decomposition takes place, and a large part of the substance in various combinations, passes into the air in the gaseous form—of the carbon so passing off, either as carbonic acid gas, or carburetted hydrogen, the atmosphere becomes the receptacle weere it remains in a state of mixture, the carbon in the state of carbonic acid gas, which, although specifically heavier than atmospheric air, and in a state of mixture only, and not of chemical combination, is found generally diffused in all situations, and varying less from a constant quantity than might be expected.

When we remember that of animal and vegetable bodies, the largest constituent part is carbon, and that therefore new bodies depend upon carbonaceous matter for their growth and composition, it will be obvious that if the carbon in the atmosphere can be rendered available for the sustenance of living vegetables, by any process that we can make use of for that purpose, that then the most important operation in farming will have been performed.

I here premise, that the farmer does not make the crop to grow: he destroys the weeds, opens the ground to the proper depth, sows good seed in proper quantity and at the right season, covers it sufficiently—mixes with the soil such substances as are necessary for the growth of the plant, and in such place that the living plant can render them available to its growth; the laws originally impressed upon matter, and the blessing of Heaven produce the result.

Lime and magnesia were formerly considered as alkaline earths, and as such I shall here treat them; both of them have so much affinity for acids, that in nature I believe they are always found combined with them; my recollection is, that of the principal acids, both lime and magnesia have the least affinity for carbonic, and the greatest for sulphuric acid; yet as the stronger acids are not found in the atmosphere, whilst the carbonic acid is always there present—both lime and magnesia, when freshly calcined and in the states known as quick lime and pure magnesia, and exposed to the air, absorb carbonic acid gas from the atmosphere and become carbonates.

Thus far there appears to be an approach to general agreement, viz: 1. That vegetable and animal matter are formed in part of carbon: 2. That in the decomposition of vegetable matters, the carbon in part escapes into the atmosphere, combined with oxygen, forming carbonic acid gas: 3. That lime and magnesia, when in a caustic state, as produced by calcination, and exposed to the air, absorb the carbonic acid gas. Therefore, when lime or magnesia in the caustic state is reduced to an impalpable powder, and thinly spread upon the surface of the earth, it will rapidly become a carbonate; and thus we shall have a carbonaceous compound upon the surface of the earth, in such a situation as to be accessible to the roots of plants. I believe that many plants have the power of separating the carbon of the carbonates of lime and magnesia, thus placed within their reach, and appropriating it to their own growth and increase; but the progress of the growth and development of plants being under the government of the occult principle of life, our evidences can consist only of analogies—of probabilities drawn from the known properties of chemical substances.

Can the roots of plants absorb carbon from the carbonate of lime in the earth?

Certain plants do take up substances more difficult of solution, and for which I know not that any plausible theory has been offered: thus, pure flint is found in the cuticle of some plants: in the scouring rush, *equisetum hyemale*, and pigeon weed, *lithospermum arvense*, plants of our district, it is abundantly perceptible.

The following paragraph is extracted from the North American Review, for October, 1842, stating a case wherein the roots of living plants overcame an existing combination much greater than the case in question.

"It must have been in the observation of many persons who cultivate ornamental bulbous roots in glasses, that the inner surface of the glass loses its polish and becomes rough; this is merely from the decomposition of the glass—now water alone will produce no such effect upon glass; the living plant communicates by its roots through the water, (for the roots are generally not in contact with the glass) an influence powerful enough to separate the potash of the glass from its strong combination, and transfer it to itself. With the knowledge of such facts in our view, we are not left to the necessity of rejecting a belief in the existence of any process in vegetable life, merely because it cannot be explained by the laws of inorganic chemistry."

I make the following extracts from Liebig's Agricultural Chemistry, New World edition, 1843, page 9, on the article Humus:

"Woody fibre in a state of decay, is the substance called *humus*." "The carbonic acid which protects the undecayed humus from further change, is absorbed and taken away *by the fine fibres of the roots and by the roots themselves*, this is replaced by atmospheric air, by which process decay is renewed and a fresh portion of carbonic acid formed." "The roots perform the functions of the leaves from the first moment of their formation; they extract from the soil their proper nutriment, namely, the carbonic acid generated by the humus."

How will this theory be sustained by the results, so far as we have had experience?

If this be the true theory, lime should be spread upon the surface in the state of a fine powder, and suffered to lay upon the surface until it became mild by the absorption of carbonic acid gas—for the object is to obtan the carbonic acid to unite with the lime, *from the air and not from the earth;* for if the lime is placed in a situation to obtain carbonic acid from the earth or the decaying humus of the soil, no advantage would be gained; it being very probable that living plants can assimilate the carbonic acid more easily from decaying humus, than from carbonate of lime—but if the lime absorbs the carbonic acid from the air, it is a quantity fixed in the soil in addition to what before existed there, as manure, decayed humus, &c. So far as we have experience, it is, I believe, decidedly in confirmation of the theory. I applied lime to my grounds many years ago, putting it on at the same time with the stable manure to the wheat crop, and with some care to have them ploughed in together, without exposure to rain or dew; the results were so discouraging, that I discontinued the use of lime for some years—the wheat crop was generally injured, although good crops of grass succeeded, which should have been the result according to the theory—the carbonic acid gas, given out by the decomposing manure, instead of being made available to the growth of the wheat, became absorbed by the lime, thus diminishing the proper support of the wheat, but which was afterward furnished to the grass. Thirty or forty years ago, when little lime was used as a manure, it was occasionally mixed in the dung hill; but more frequently mixed with corn stalks and decaying

vegetable matter, as a kind of compost; these methods of using it have been abandoned, as improper; which should be the result according to the theory.

According to this theory, there should be no disadvantage from using lime, (so called) much mixed with magnesia, as the latter requires about as much carbonic acid for its saturation as the former; it is more soluble, and in particular, is more acted upon by ammonia, but requires more time for its saturation with carbonic acid gass; it would therefore require some longer time than pure lime, before being ploughed down.

From recently published analyses, it appears that the lime of the great valley, or range, passing through Montgomery, Chester, Lancaster and York, is nearly one half magnesia. Of this lime, millions of bushels are annually sold as a manure, and used in Jersey, Pennsylvania, Delaware and Maryland, with results so encouraging, that the demand has increased more than ten-fold, within ten years.

From the circumstance that lime is found in small quantities in some vegetables, it has been supposed that it is useful only for the purpose of furnishing the requisite quantity of lime thus found in their substance; late experiments made by incinerating vegetable matters, go to show that 50 bushels of lime per acre, would not be taken up in an hundred years, by those plants in which it is found to exist in the largest proportion.

It may properly be objected, that if the roots of plants can and do decompose the carbonate of lime in the soil, and use the carbon or carbonic acid gas, for their own growth and nourishment, that the lime would again be caustic and uncombined. It is, however, a possible case, that plants may possess that power, and that they may not always be obliged to use it: it is known that in dark cellars and covered places open to air, but not to light, that nitrates are formed; and in whatever way any acids may be formed in the earth, having more affinity for lime than the carbonic, the latter would be ejected from its combination with the lime, which would unite with the stronger acid, (if the nitric, forming a soluble compound and sinking away in the earth,) in which case the carbonic acid gas would be uncombined, and as available for the growth of plants, as if arising from the decomposition of stable manure.

To conclude, my view is, that the air as well as the soil contains the elements of which vegetable matters are in part formed; that the living plant appropriates those elements to the purposes of its own growth and nourishment, by its roots from the soil, and by its leaves from the air—that the *air* always contains a sufficiency of carbonic acid gas; but that the *soil* does not, and that we spread lime upon the soil to absorb the carbonic acid gas from the air, to add it to the soil.

A. W. CORSON.

Farmers' Cabinet.

SOWING CORN.

Messrs. Editors—As the sowing of corn has attracted the attention of some of our farmers, I will relate a small experiment made by me last season, that others may shun the errors I fell into for want of experience.

I appropriated a small piece of land (3-16ths of an acre,) to that purpose. The land was in corn the year before, producing about forty bushels to the acre: the hills were split, three loads of yard manure spread, harrowed and plowed under, say from 5 to 6 inches deep, harrowed again, and the corn sown at the rate of four bushels to the acre, of the early twelve-rowed yellow corn, small kernel, buried with light horse plow, and rolled.

The corn was sown on the 10th of May, the ground light and in fine order, but cold rains soon came on, and all know what an unfavorable season we had for corn; it was twice nipped by frost—the last time on the 11th of June, this gave all the weeds a chance to grow, and contest the ground with the corn; and although the ground was well tilled the previous year, and no weeds permitted to seed; yet there were enough to injure the crop, although the corn out topped them in the end. When the corn was fully in tassel, it was cut with the cradle, laid in swath, turned to facilitate the drying. When well wilted it was bound in small bundles, stooked and capped with the same; when cured, a part was weighed before carrying in, and by computation found the yield to be 5¾ tons per acre. It was fed mostly to sheep and calves, but all kinds of stock eat it with avidity. Probably there is no vegetable we raise for stock, that contains more saccharine matter than corn, and it appears the sowing of it may be made profitable, especially to those who occupy but little land, whether it be wanted for soiling or winter fodder.

The most essential errors I fell into were, first, I sowed too much seed. Three bushels of the small kernel corn I believe better than four, as mine was so thick it did not tassel. In the next place, I sowed too early by about three weeks. We can have but one crop in a season in this northern climate, and the summer months are sufficiently long to bring corn into tassel. I think, therefore, the fore part of June will be in season for sowing for winter fodder. No one need be told that land for corn must be rich, and for a sown crop should be free from weeds. If the sowing be put off until June, many weeds may be destroyed by plowing or otherwise stirring the ground before sowing. The curing must be attended to, as on this the value of the crop is mostly depending; and to make more sure, I would recommend whenever it is housed, to set the bundles in an upright position, and not pack them away as we usually do grain.

Yours, respectfully,

B. BLACKMAN.

Verona, N. Y., April, 1843.

Central New York Farmer.

LICE ON ANIMALS.

If you have purchased any animals that were poor, or if you have most unwisely allowed any of your own to become so, now is the time to examine all such carefully, and see that in addition to their being poor, they do not become lousy. There is not an animal that does not, under suitable circumstances, nourish in its hair, wool, feathers, or its skin, some kind of louse; and sometimes more than one kind of these parasites lodge and prey on the same animal. In ordinary cases, they do not produce much mischief, but when they increase so much as to produce the disease called Phthiriasis, they become truly formidable. The cause of animals being troubled with lice, may usually be traced to a want of cleanliness. When the dust and sweat accumulate on the hair, and in contact with the skin of the ox or horse, are allowed to remain undisturbed by the comb or brush; when the stables are kept filthy, unventilated, and unwholesome: when animals, reduced in autumn by want of pasture, or by living in unhealthy ones, are suffered to take their chance for the winter without extra care or attention; or when a beast loaded with pediculi, is turned into the yards or the stables of those exempt from these parasites, it may be expected that they will multiply and infest animals.—When we see horses rubbing their tails, biting their manes, and showing other signs of uneasiness and irritation; when cattle are observed to be rubbing their heads against posts of fences, and the hair coming off from the head and neck; or when sheep tear out tufts of wool with their teeth, and bite these places till blood appears, we may expect that lice are present. On most animals, these parasites have some favorite place of resort; on horses the main and tail; on horned cattle, around the nose, base of the horns, and the neck; on sheep, they run over every part; and on swine they do not seem to be confined to any particular location.

Pure air, room for exercise, plenty of food, and above all, cleanliness, are the first things to be attended to in the cure of this evil. Currying, brushing and washing should be resorted to, as, except in bad cases, this treatment will be usually sufficient to free the animal from these insects, without recourse to other remedies.—When these fail it will be necessary to have recourse to such external or internal applications as shall operate directly on the vermin.

One of the most common remedies is the mercurial ointment, unguenium; but this, though effectual, cannot be used without some danger, as numerous instances have occurred in which valuable animals have been destroyed by its use. When its use is necessary, care should be taken to prevent the animal from biting itself where the ointment is applied, until it has had time to take effect. A decoction of tobacco leaves, in a strong lye, forms a very good wash; but this, too, owing to the narcotic poison of the tobacco, has caused death. Various vegetable remedies have been resorted to, among which are the seeds of the Delphinium staphysagria; and the leaves and flowers of the Ledum palustre, or marsh tea. The roots of the black hellebore, or a decoction made from them, have been used with success; and it is said the water in which the skins or parings of potatoes have been boiled, will effectually destroy lice by a few washings. The internal use of sulphur is an excellent remedy, and if given to animals occasionally, is one of the best preventives.

It is more difficult to apply remedies for lice to sheep, than to any other animals. The English shepherds make use of a salve compounded of white arsenic and corrosive sublimate, carefully parting the wool, and applying the ointments in small quantities directly to the skin, and rubbing it down with the finger. Tessier prefers tobacco smoke to this ointment, as involving less danger in its use. The sheep is held in such a manner that tobacco smoke is forced from a bellows among the wool to the skin in all directions. After this fumigation, the sheep must be placed in the open air, that the vapor may have room to pass off without being inhaled by them. Perhaps the best remedy for lice in animals, where they have not become so numerous as to produce the disease phthiriasis, is to rub any oil, such as whale oil or melted lard, on such places as they most frequent, or on parts of the animal where they will be most likely to come in contact with it. All the pediculi breathe through what are termed spiracles or openings in their bodies, and the least particle of oil spread over their bodies, by causing suffocation, at once effects their destruction. This is also a perfectly harmless remedy. But prevention in this case is better than cure; and neatness, cleanliness and good keeping, by insuring comfort and health, leaves no opportunity for the attacks of vermin.

Albany Cultivator.

Facts Worthy of Notice.—Whenever the farmer or planter discovers his field covered with sheep sorrel, he may conclude that the soil needs liming, the presence of the sorrel being unerring evidence of the absence of calcareous matter, and that the soil is too acid for the purposes of healthful vegetation.

Lands, too, whose natural growth is pine, require lime, as that wood almost always delights in an acid soil devoid of lime.

Clover, sainfoin, lucern, and all grasses of this family, require that there should be lime in the soil on which they may be grown, and, indeed, it may be said to be labor lost to attempt to cultivate them advantageously on lands in which this mineral does not form a constituent element. Now, may it not be the absence of lime in much of the soil of some of the southern portions of our country, which opposes such obstacles to the growth of clover? We think it demonstrable that it is, and we are equally certain, that if lime or marl were applied to all such lands, that clover might be grown there as well as in any other part of the country.—*American Farmer.*

Educate a community in the idea that to work with their hands is degrading and dishonorable, and you educate them for vice and misery.

WEDNESDAY, JUNE 7, 1843.

BACK NUMBERS.—All new subscribers to the "Southern Cultivator" can be supplied with the back numbers.

OUR ACKNOWLEDGEMENT.

To our friends in various sections of GEORGIA, SOUTH CAROLINA, ALABAMA, MISSISSIPPI and TENNESSEE, who have interested themselves in extending the circulation of the *Cultivator*, we beg to return out most sincere and cordial thanks, and to assure them that the work is daily receiving a degree of favor for which we did not dare to hope. We trust however they will not relax their exertions until it is placed upon a most secure and stable foundation, which it is rapidly acquiring.

CURING SWEET POTATOES.

In this number of the *Cultivator* we present the reader with two communications on the subject of curing this valuable esculent, for which we thank our friends "COPELAND" and "AGRICOLA, JR.," and hope they will continue to enrich our columns with their views on any subject calculated to interest and instruct the planter.

To the enquiry of "AGRICOLA, JR.," we have to remark, that at present we are unable to give him the best and simplest mode of analysing soils, but as soon as we can procure from one who has much experience on this subject the best mode, we shall communicate it through our columns.

☞We have been furnished by our friend, B. H. WARREN of this place, with the following list of the yield of wool as taken from ten (half blood) *Leicester* sheep, this spring, and which were last spring lambs:

No.	1,	6¾ pounds.
No.	2,	6½ "
No.	3,	6 "
No.	4,	5¾ "
No.	5,	5¾ "
No.	6,	5½ "
No.	7,	5 "
No.	8,	4¾ "
No.	9,	4¾ "
No.	10,	4½ "
		55

Making an average of 5½ lbs. of wool to each sheep.

The above yield is certainly a very fine one for this section of country; and we should like to see many more of our planters turning their attention to this stock.

These sheep are spoken of in the highest terms by those who have seen them, as being large, well formed, clean limbed, and easy to fatten, and their yield of wool is certainly very good. And it is further to be remarked, as we are informed by Mr. W., that they have not been fed but once during the whole of the past winter, which was during the snow in March. Having been put on a rye lot the first of November, they have done well and kept fine on rye the whole time, and even to this date.

AGRICULTURAL WORKS.

"THE AMERICAN AGRICULTURIST" is the title of a most valuable and interesting publication, issued monthly in New York, edited by A. B. ALLEN, Jr., and, as its name imports, is devoted to American agriculture. The work is rapidly acquiring a large list of valuable correspondents throughout the Union, and bids fair to be a work of no ordinary merits in its department. The typography is unexceptionable.

FARMER'S ENCYCLOPEDIA.—No. 6 of this valuable dictionary of rural affairs, is on our table. We have before alluded in terms of commendation to this excellent work, and we need now only repeat that it should be in the hands of every planter.

CURE FOR WORMS IN CHILDREN.—A writer in the Farmers' Register, who being a slaveholder has a large family under his care, says that for nearly thirty years he has found the following preparation a certain cure for worms: "Take the fat of old bacon, sliced and fried in a pan until the essence is all out of it, take out the rind first, then put in as much wormseed (vulgarly called Jerusalem oak,) as is necessary, as much sugar or molasses as will make it palatable, and give it three mornings in succession.—The children will eat it freely—some you will have to restrain from eating too much. Incredible as it may appear, I have known as many as one hundred and twenty or thirty large worms come from a child three or four years old. I usually give the medicine spring and fall."

INDUSTRY.—Every young man should remember that the world always has and always will honor industry. The vulgar and useless idler whose energies of mind and body are rusting for want of exercise—the mistaken being who pursues amusement as a relief to his enervated muscles, or engages in exercises that produce no useful end, may look with scorn on the smutty laborer engaged in his toil. But his scorn is praise. His contempt is an honor. Honest industry will secure the respect of the wise and good among men, and yield the rich fruit of an easy conscience, and give that hearty self respect which is above all price.

Toil on, then, young men. Be diligent in business, improve the heart and the mind, and you will find the well-spring of enjoyment in your own souls, and secure the confidence and respect of all those whose respect is worth an effort to obtain.

INDELIBLE INK FOR LINEN, &c.—Put half a drachm of lunar caustic, (nitrate of silver,) into a small vial of water: add a piece of Gum Arabic of the size of a pea, and a little of the paint called sap green, to make it more legible while writing. When the whole is dissolved, it is fit for use. The part of the cloth to be written on must be previously wet with a mixture of a small quantity of saleratus and gum Arabic, dissolved in water, and pressed smooth with a hot iron. The writing should be exposed to the sun, which will cause it to dry darker than in the shade.

DISEASE OF COWS.

Messrs. EDITORS—A friend of mine lately lost a very valuable cow, soon after calving, under the following circumstances. She calved and did well to all appearance at first, but soon began to be affected in her fore quarters; if she attempted to walk, her fore feet remained stationary, while her hind ones moved around circularly. She soon died. She had been kept well for three or four years, and was so fat, that when she died 100 lbs. of tallow were taken from her. As it is an uncommon case among us, permit me to inquire of you, or some of your numerous subscribers, the nature of the disease, the remedy, &c. S. W. BARTLETT.

Scantick Village, Ct.

The case noticed by our correspondent is one of *puerperal fever*, or as it is termed by veterinarians, "*dropping after calving*." Cows in high condition are most subject to this disease, which usually appears in from one to five days after calving. The first symptoms are decidedly febrile; the animal is restless, shifting her feet and breathing laboriously. The nose is hot, and the udder is inflamed, enlarged, and tender, from the very commencement.

REMEDY.

Bleeding, from six to ten quarts, to be regulated by the impression made on the circulation, must be resorted to at once, and the bleeding must be followed by physic, for which purpose a pound or a pound and a half of Epsom salts are best, and half pound doses every six hours, till the bowels are opened. If the disease is not attended to in the outset, and it is too frequently neglected, the nervous system is speedily attacked, when the symptoms of staggering, &c., noticed by our correspondent, usually occur. It is occasioned by a partial paralysis of the fore or hind quarters, most commonly the last; the animal soon falls, her head is bent back to her sides, and death soon supervenes. In the last stages, there is little hope or chance of relief; but if the pulse is such as to indicate fever, bleeding may be resorted to till the last, with a bare possibility of saving the animal; but great care is requisite, as the bleeding, carried too far, is fatal at once. In some papers in the Veterinarian, Mr. Field relates several instances successfully treated by Epsom salts in large quantities, followed immediately by Croton seed and sulphur.—*Albany Cultivator.*

ENGLISH AGRICULTURE.

Whatever opinion we may form of Britain, her pride, arrogance, insolence, presumption, vanity—faults, too, that will have to be amended within ten years by the compulsory process of a general alliance of nations against her—yet we must all confess that her agriculture is the most stupendous thing under heaven! When it is remembered that the crop of turneps grown in Norfolk alone is greater than the value of her trade with China; that the market price of geese brought from the Lincolnshire fens is more than her trade with Denmark; that you shall see, as a common thing, a hundred acres of turneps, or a hundred acres of beans, or thirty acres of cabbage in a single field—a farm of three hundred acres all mown, or a farm of the same size, (three hundred acres) all in crops—the live stock on a single farm worth $50,000—twenty horses employed on one farm every working day in the year, and by means of thrice ploughing, (heavy clays,) turning nine hundred acres in a single year—I say, when this is remembered, it will be seen that "great" as Britain is in every thing, the superlative degree of greatness is in her agriculture—in her soil, naturally poor, but made rich by the application of capital and unwearied assiduity, good sense and enterprise. While in this country we fail most from the want of capital, and from the circumstance that agriculture does not rank as an employment with others (especially with trade it is not valued) as it ought to be. The English contend that it was never so valued in a democratic country; agriculture being, in their estimation, substantially an aristocratic employment; and it must be con-

lessed that this is true of England. To be wanting in the dignity conferred by landed possessions, is to want that which conducts to the highest offices and the most exclusive society.—The term country gentleman, is in England almost an actual patent of precedence; and so far do they carry this, that no man in trade can marry into a family of landed descent and possessions, unless he add to wealth an eminent character for talent.—*Farmers' Monthly Visitor.*

There is nothing in a democratic government that deters from the pursuit of agriculture.—There is no portion of the earth more zealously devoted to our democratic institutions than the people of Virginia, yet are they strictly an agricultural population. In truth, wherever nature has granted a favorable climate and soil, such are the innumerable advantages of this delightful occupation, that it must enlist amongst its votaries the great mass of mankind. Those, whose means induce them to look rather for enjoyment than accumulation, will always seek the noble pleasures of a country life; and he who wishes to engage in agriculture where it is sanctioned by the example of the aristocracy of wealth and learning, need not go to England to seek it. He will find it throughout the whole southern country. The farmers compose the aristocracy of Virginia, certainly; they know and feel it; you can see it in the slow and solemn gravity with which they pace our streets, when business brings them to the city; they look down upon the hurrying cit, as they meet him on the side walk, with ineffable contempt; they know that he is the patient drudge who labors in their service: whilst they, the lords of the land, revel in the luxury and ease that their more favorable occupation secures them. We know nothing here of that which is so often complained of at the North, the unjust degradation in which agriculture is held. The name of *Planter*, at the South, is almost equal to a patent of nobility, and the occupation, in point of dignity and importance, has nothing to fear, with us, from the sneers of the most haughty.

Southern Planter.

A PLEA FOR THE BIRDS.

As the season is at hand when the birds begin their labors in our fields and gardens, it becomes their friends to interpose for their protection from the wanton persecution which pursues them as regularly as they make their appearance. No fact in natural history is more certain than their really useful services—though we are not prepared to admit this to be their only or their highest claim to our regard. It has been ascertained by various and careful experiments that they protect our choicest fruits from the ravages of the insect tribes. That they are sometimes mischievous in the autumn is not denied, but the little harm they do in the fulness of the year is more than compensated by the destructive havoc they make amongst the insects and vermin of the spring. The quantity of grubs destroyed by crows, and of catterpillars and their grubs by the various small birds, is immense. Other tribes of birds, which feed on the wing, as swallows, martins, &c. destroy millions of winged insects, which would otherwise infest the air, and become insupportably troublesome. Even the titmouse and bulfinch, usually supposed to be so mischievous in gardens, have actually been proved only to destroy the buds which contain a destructive insect.—Ornithologists have of late determined these facts.

An English paper tells us that some of the large farmers in Devonshire, under a strong prejudice, determined a few summers ago, to try the result of offering a great reward for the heads of crows; but the issue proved destructive to the farms, for nearly the whole of the crops failed for three succeeding years, and they have since been forced to import birds to re-stock their farms, We add a few other facts collected from experience:

"Every crow requires at least one pound of food a week, and nine-tenths of their food consists of worms and insects; one hundred crows then in one season destroy four thousand seven hundred and eighty pounds of worms, insects and larvæ: from this fact some slight idea may be formed of the benefit of this much persecuted bird of the farmer."—*Mag. of Nat. History.*

The Blackbird destroys a great number of Grubs, &c.—"Last August I observed eight or ten Blackbirds busily engaged in the grass plain in front of my house, and the grass where they were seemed dying, as was hinted, from their mischievous operations, and the gun was suggested as the remedy. Suspecting the object of the birds' search, I turned up a piece of turf with the spade, and found it literally swarming with grubs of various sizes. I need not say that they were allowed to pursue their game undisturbed, and that the grass plat soon regained its verdure. This is another instance of the utility of preserving birds on farms, and in orchards and gardens."—*Ib.*

* * At the season to repay the gardner for the tithe of his crop, their natural due, they fail not to assist in ridding his trees of more deadly enemies which infest them, and the small caterpillars, beetles, and various insects now constitute their only food; and for hours at a time they may be seen feeding on the all dispoiling canker worm which infest our apple trees and elms."—*Nuttal's Ornithology.*

The Boblincoln is perhaps next to the Cedar bird or Canada Robin, the greatest destroyer of the canker worm. Building her nest and rearing her young under the apple trees, as this bird often does, she requires an immense number of worms for their subsistence just at the time that they are most destructive. "I have observed one of these birds," says a neighbor, "go round the limb of an apple tree in a spiral direction, and destroy in this way every worm on the tree, in an incredible short time. No man," added he, "can calculate the value of birds on a farm. I have no doubt but that they have saved me equal to the labor of one man for the season, besides preserving my trees from destruction."

Birds, then, not excepting the hawks and owls, are vastly more useful than injurious to man. None of them should, under any pretence, be destroyed.—*Sentinel of Freedom.*

Home and its Affections.—How sweet are the affections of kindness! How balmy the influence of that regard which dwells around our firesides! Distrust and doubt darken not the brightness of its purity; the cravings of interest and jealousy mar not the harmony of that scene. Parental kindness and filial affection blossom there, in all the freshness of an eternal spring. It matters not if the world is cold, if we can but turn to our dear circle, and ask and receive all that our own heart claims.

Horses.—An ounce of *prevention* is worth a pound of *cure*. Horses should never stand long on a dry plank floor. Their fore feet, particularly, should rest on something more pliable.—Some, who object to loam and to tan bark, keep a trough of water and require the horse to stand in it for hours. By traveling fast on hard roads a fever is created in the fore feet, and road horses are ten times more subject to it than farm horses. When a horse has travelled all day on a hard road, it is cruel to make him stand all night on a hard floor.

To Gardeners.—It you wish to preserve your cabbage from the ravages of the cut worm, hill up the plant until the bud is covered with earth a half an inch or an inch deep, which will not injure the plant. Be sure to let the main leaves stand up out of the ground. The worm will then cut off the stems of the leaves instead of cutting down the stalk, and the bud will soon grow out of the ground uninjured by the covering. This plan has been tried with success in this place, when every other effort to preserve the plants had failed.—*Dahlonega Times.*

Corn Stalk Syrup.—We have before us an article of Corn Stalk Syrup, which is equal, in every respect, to the best molasses. It was left at our office by Col. John S. Thomas, of this county. The process of manufacturing, we learn was of the simplest character. The corn stalks were cut up, beaten in a trough, and then thrown into a common cider press—the juices of the stalk then underwent boiling, &c., and the syrup is thus made. Our planters without exception, should prepare to make this syrup—if not for a market, at least for their own home consumption. The sample before us was made in South Carolina. The stalks from an acre of land, it is said, will produce about ninety gallons.—*Georgia Journal.*

AUGUSTA MARKET.

Tuesday p. m., June 5.

Cotton—The market for a few days past has been very firm and active, with heavy sales for the season, at prices ranging from 4¼ to 6¾ cts. as extremes of the market—principal sales 5½ to 6 cents. By yesterday evening's mail we had accounts from Liverpool to the 19th May, showing a shade advance in the lower and middling qualities, which will doubtless sustain the firmness which our market has exhibited for several days past, and may give it more activity with a very slight improvement in those descriptions.

Exchange—The rate of Exchange on the Northern and Eastern cities remains at par, and the supply is equal to the demand for business purposes. Central Bank notes range at about 15 ℔ cent discount. Alabama notes 15 @ 17 ℔ cent discount. State 6 ℔ Bonds command readily 55—there are however but few offering.

CONTENTS OF THIS NUMBER.

	PAGE.
Curing Sweet Potatoes; Responsibilities of American Women	89
Cultivation of the Raspberry; Corn Stalk Sugar	90
Nutritive Properties of different Crops; Charcoal as a Manure; Tanner's Bark; Economy in feeding Cattle; Substitute for Cream; Salt for Cattle	91
Col. Waile's Address	92
Recipes; Cough in Horses; Lime as a Manure	93
Sowing Corn; Lice on Animals; Facts worthy of Notice	94
Our Acknowledgements; Curing Sweet Potatoes; Sheep; Agricultural Works; Cure for Worms in Children; Industry; Indelible Ink; Disease of Cows; English Agriculture	95
A Plea for Birds; Home and its Affections, Horses; to Gardeners; Corn Stalk Syrup; Augusta Market	96

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COMMUNICATIONS.

STANFORDSVILLE, PUTNAM CO., June 9th, 1843.

To the Editors of the Southern Cultivator:

DEAR SIRS—I see a piece in your paper of May 24th, headed "Anonymous Contributors." I agree with you on that subject, as I always take more interest in reading a communication with the writer's proper name under it, than I do those that have some fictitious name—particularly those that are written on the subject of agriculture and its kindred pursuits. But, sirs, there are a great many farmers that have but little education, though some of us may have as good ideas on practical farming, and as much experience in all its various branches, as those who have the advantage of education, and can write with ease all they know on the subject. I should, therefore, like to see a promise from you, that you will set in order all communications that are written for your paper on the subject of agriculture;—giving those that are inclined to write for your paper to understand that they need not fear to put their proper name to their communications. You will readily perceive that I am one of those that stand in need of your help in the correction of my errors, both of spelling and diction. Under these considerations I shall, at this time, give you a few passing thoughts, and shall confine myself within the range of the planting and farming interest, and term them

PRACTICAL HINTS.

In the first place, every planter should strive to make corn enough to serve him, and by no means undertake to make cotton to buy corn with, or any thing else that can be conveniently raised at home—especially while cotton is at its present low price.

No farmer or planter should undertake more than he can have done in its proper time, and that well done when it is done. This way of being under whip and spur the year round, for the sake of making a few more bales of cotton than could be made by taking things concerning our interest in their proper order, I think unwise, and could give several reasons, but one at present is enough. Such a planter never has any time for improvement, such as ditching his hill sides to prevent their washing off, nor for raising manure. He can scarcely find time to haul out and apply what little has accumulated about his stables, (if he has any.)

All farmers should keep their fencing in good order; see that the holes and water-gaps are well stopped. It is much easier to keep pigs, as well as every other kind of stock, out of the fields, than it is to stop them out after they have once found their way in and committed some depredations on the corn, potatoes, &c.

Every farmer should raise all the manure he can, and be sure to apply all he has at least once a year, and not suffer it to lie about his stable yard for two years, by which time about one half its fertilizing qualities have evaporated. My plan is to haul out and apply all I have in the spring, invariably broadcast, except cotton seed, which I apply to the hills of my corn. What manure I can scrape up in October, I have hauled out and scattered on the poorest parts of the field where I seed my wheat, and, from my experience, manure is as profitable used in this way as any other I have tried.—Strong land for wheat is better without manure than with it. The reasons why I might give, but believe it mill not be doubted by men of experience; but on poor land for wheat, manure shows its benefits to the last inch of its application, and if the manure be of a valuable kind it may be put on the land quite thinly, but never should be scattered on the land till every thing is ready to plow it in, as there is great loss by evaporation should it be long exposed to the air and sun.

We have seen accounts, in some of the agricultural papers, of large quantities of corn being raised per acre in some of the Northern and Northwestern States. Such statements may be doubted by some of my Southern friends for aught that I know. I have no just grounds to say that they are incorrect. But I can say to the planters of this State, that we need not calculate on making as much corn to the acre as is made to the West and North of us. I shall congratulate the man who can arrive at one half the quantity, or even to 60 or 70 bushels per acre. Do not be discouraged, however, by these views, but let us make all we can. My reasons for this opinion are, first, our soil is not near so deep as it is where those large crops of corn are made; and in this climate corn cannot bear being planted more than half as thick as where they plant for those large crops. How do you think corn would stand even a slight drought in this climate, and on our thin soil, if planted only about two and a half feet apart each way. I, for one, believe that it would not do; yet it is certain where those large crops are made that the corn is planted very close—in some instances nearer than above stated.

In conclusion, Messrs. Editors, I thank you for undertaking to publish a paper devoted exclusively to Southern agriculture. I wish you success in your laudable enterprise, and hope you will not lack for subscribers or contributors among our planters and farmers, which will render the Cultivator so interesting a paper that every man that runs as much as one plow will take it. For I concur with a writer for the Tennessee Agriculturist, who says, "that every farmer that runs as much as one plow ought to subscribe to an agricultural paper."

I am, sirs, yours respectfully, &c.

JOHN FARRAR.

MOUNT HOPE, EFFINGHAM CO., June 10, 1843.

Messrs. JONES—I see in your Cultivator, page 82, a very sensible letter from Mr. Ernest, of Bibb county, upon matters and things generally, but upon the subject of the silk business particularly. This part of his letter is particularly interesting to me, as I have been engaged in the culture of silk for several years in a small way. I fully concur with Mr. Ernest in the opinion that silk can be cultivated in Georgia as profitably as any where else, or as any thing else. I will not say it can be made as profitable as cotton ever was, but as profitable as cotton ever can be again.

Mr. Ernest thinks if there was a market for cocoons in his neighborhood, many poor persons would engage in the business, and one lady who had abandoned the business, had said to him, that she would resume it if she could get $2 a bushel for cocoons. I hope this market will not be long wanted; indeed, I will say it shall not be wanted at all at such prices, for I will give, in Macon, for all cocoons of good quality, $2 50 per bushel, and for the best peacocoons, $3 per bushel, and will establish an agency there for the purchase of all that may be offered, as soon as I am advised that they can be obtained. I am surprised that Mr. Ernest has not opened such a market at his own house before now; for if he can buy cocoons at such prices, he could surely make a profitable business of reeling and selling the raw silk, if he did not choose to manufacture it. I have obtained a machine and manufacture all I make into sewing silk. I have found some difficulty in dying the various colors without destroying or injuring the lustre, particularly the black and blue black.

I send you herewith seven skeins of as many colors, from which I think you will conclude I have succeeded tolerably well in giving the colors and retaining the lustre.

The greatest difficulty I find in the business is to preserve the eggs for a succession of crops. I have succeeded very well with the second crop, but I find so much difficulty in preserving

them longer, that I now obtain eggs from the North for my third and fourth feeding; but I hope we shall yet be able to overcome this difficulty. The early part of this season was cold, wet and unfavorable, yet my worms have never been more healthy, or made better cocoons. My second lot are just beginning to spin, and my third are hatched and ready to take their places. Respectfully yours, &c.

HUGH CASSIDEY.

CRACKER'S NECK, June 12, 1843.

Messrs. JONES—Having given the weight of my small influence towards the circulation of the Cultivator, and believing that any idea, however humble, that is profitable, will receive a welcome from the friends of agriculture and rural economy, I drop you a few lines relative to my mode of attending to cattle, especially milch cows, and I have found it so cheap and profitable that I cannot consistently withhold it from your numerous readers.

My mode is to build a common shed or shelter, having the roof to turn either way from the centre—to effect which, I place my centre posts say 14 feet high, and my eave posts say 7 feet high. From the centre to the side post there is a space of some 7 feet. I then put up what I term my ridge and eave poles, and nail on my rafters and cover in with four foot boards. I then have large troughs and place them through the centre of my shed, and fit it out in stalls some five feet wide, and place a rack immediately over the troughs to hold the provender. I have a small lot attached, which I keep well littered, and from which I make an immense quantity of first rate manure. I use the leaves of the woods for my litter, and when I find they are sufficiently decomposed to make a good manure, I pile them up and haul in more, by which means I find no difficulty in keeping on hand a good supply of first rate manure. I always keep plenty of salt in my troughs, and I find cattle do much better than to salt occasionally, as the cows do not overcharge their stomachs, and the consequence is they keep in a healthy condition and give us any quantity of rich milk and yellow butter. If you think the above worthy a place in the Southern Cultivator, it is at your service.

Respectfully, C. S. C.

CATTLE AND SHEEP OF GREAT BRITAIN.—We find the following in a late English journal, and give it for the purpose of comparing it with some of our own statistics and prices:

"The total number of horned cattle in the United Kingdom is estimated at 7,000,000, and the total number of sheep at 32,000,000. Valuing the first, per head, at £10, and the last at 25s., both together will give a total value of £110,000,000.

In the United States, according to the census of 1839, the number of horned cattle was 15,000,000, and the number of sheep 20,000,000.—But the difference in the estimated value is the most striking point in the comparison. There the average value is put at about $45 for the cattle, and about $6 for the sheep. Here, an average price of $12 for the cattle, and $1 50 for the sheep, must be considered a liberal estimate. This fact shows why the prices of meat are so high in Great Britain, and proves that we ought to be able to furnish them a supply of beef at remunerating prices. We think it clear that in the present position of trade, tariffs and prices, a fair export trade in beef and pork to England may be expected.—*Albany Cult.*

ASHES.

To the Editor of the Farmers' Monthly Visiter:

Mr. HILL—I have read in several of the agricultural papers, within a few months past, various accounts of the value of ashes in agriculture, both leached and unleached; and in most cases their application was attended with decidedly beneficial results. But there is a great difference in the value of soapers' leached ashes and those from the pot or pearl ash factory. Dr. Dana says, "the soap chandler, in leaching ashes, uses about one peck of lime to each bushel of ashes." This is used for the purpose of taking up the carbonic acid in the ashes, which makes the ley *caustic;* it then readily combines with the oil or grease, and forms soap. The lime used with the ashes is "quick lime," or in other words lime that has had its carbonic acid driven off by the process of burning. After being leached it is carbonate of lime, from the carbonic acid derived from the ashes, and is chemically the same as before being burnt. Then in 125 bushels from the soap boilers, we get 100 bushels of leached ashes, and 25 bushels of carbonate of lime. The manufacturer of pot or pearl ash, covers the bottom of his leach tubs with swingle tow or straw, and puts over it a bushel or two of slacked lime, and does not renew the lime again during the season of making; consequently, there is no lime mixed with the leached ashes from the potash.

From the above facts, every one will see there is a material difference in the value and effects of the two kinds. Therefore, the farmer that uses leached ashes from the potash, expecting to realize the same results as those do that make use of soaper's ashes, will be likely to meet with disappointment. I have never seen Dr. Dana's "Muck Manual," but have read a few extracts as published in the agricultural papers. In one of them, the Doctor goes into a calculation to prove that soils are not exhausted of their lime and ashes by cropping or cultivation. For by his figures he makes out that an acre of soil to the depth of six inches "contains 3,626 lbs. of lime, and 73,311 lbs. of potash, or nearly 1¼ ton of lime, and 36 tons of potash." Well, every farmer must say there is enough in all conscience of lime and potash in his soil; and I do not at all dispute the Doctor, but if there is that amount I believe it is nearly insoluble, and therefore of little use. Liebig says, the lands in Virginia, by long cultivation, become entirely unproductive in wheat, for *want* of potash in the soil; he says, (if I recollect right, it being more than a year since I have seen his book,) that there is twelve pounds of potash annually carried off the soil, in the grain and straw of an acre of wheat—1200 lbs. in a hundred years. But according to Dr. Dana's statement, there would be left *there*, in the soil, some 36 tons of potash per acre. Now, Mr. Editor, I am a "plain, practical, every-day farmer, and shall not attempt to decide where learned doctors disagree. But being willing to contribute my mite for the benefit of our *craft*, I will state a few facts, and give my views, with the hope that they may result in further investigations, but not having the happy talent of saying much in a *few words*, I hope you and your readers will excuse the long yarn I am about spinning.

I think I can furnish a few facts, to prove that the application of ashes to the soil in addition to the 36 tons, is attended with beneficial results. I believe also the part that ashes perform in agriculture, is not fully understood. The general opinion is, that it acts as a stimulant to the growing plants, and a decomposer to vegetable matter in the soil, and perhaps the above opinion is partially correct. I apprehend the most important part ashes perform in agriculture, is in decomposing *silicia*, and rendering it soluble, so as to be taken up by the rootlets of plants, and by proper vessels carried to every part, and there assimilated and applied to the various purposes for which nature intended it, viz: to form the skeleton of the plant or tree—the glaze on the corn stalk and kernel, the outer covering upon wheat and other straw and grasses, &c. The material of this glaze is derived from that kind of rock called quartz, (sometimes called rock chrystal, or white flint stone;) it is dissolved and rendered soluble by an alkali. Some kinds of trees require a much larger quantity of their structure than others, and produce a much greater amount of ashes upon being burnt. The burning of wood converts it again to silica; the insoluble part of ashes is mostly silex. Oak requires a much larger amount as it is much heavier than pine wood. To prove the solubility of silica by potash, I will state a few plain facts, because we common farmers want facts, and illustrated in a way that we can understand them. From the fact that ley dissolves the silica in wood, tubs for leached ashes are usually made of pine, as they are not so powerfully acted upon by the ley as if they were made of oak. An oak tub, after having been used a few times for a leach tub, would have its silica dissolved, and a stave four inches in width upon being dried, would shrink to two inches, wholly in consequence of the dissolving of the silica (gritty part.) But the ashes do not operate upon the vegetable tissue or fibre of the wood.

When it was the custom of farmers' wives and daughters to spin their thread from flax, the next process was to boil it out in *ley* to soften and remove the harshness of the thread by dissolving the minute particles of silex; but it did not destroy the strength of the vegetable texture. Manufacturers of paper from straw go upon this principle: the straw is boiled in lime water or ley, the glaze upon it is dissolved, and the vegetable fibre is unharmed. From these facts, then, it would seem the alkali acted upon the inorganic rather than upon the organic or vegetable matter.

Dr. Dana's statement of the amount of potash may be correct; but I will try to prove that I am right in my conjecture, as to its being insoluble, and therefore inert. Common granite is the prevailing rock in New England, and is composed of three different minerals—quartz, felspar and mica; quartz is supposed to be of an acid nature; felspar contains 12 to 15 per cent of potash; mica from 5 to 8 per cent of potash. Chemists tell us that the rootlets of living plants and trees have the power of decomposing *granite* rock, to obtain the potash we find in their ashes. 'Tis said, "the living plant is a consummate analist." I will, though with much diffidence, give you my theory of plants decomposing rocks.

The decomposition of vegetable matter always produces an acid—or in other words the decaying or rotting, or more properly the slow combustion of vegetable matter partially converts it into carbon. The oxygen of water combines with the carbon and produces carbonic acid. This acid in its liquid and gaseous form, having an affinity for the alkali in the rock, dissolves it; the alkali dissolves the silica, (quartz) and by the endosmose principle of the living plant, the water holding these in solution is drawn up by the rootlets, and these salts disposed of and assimilated to the purposes designed by the first great cause. In proof of this position, I forward you a piece of rock, not acted upon by the "living plant," but by decomposing vegetable matter, and it will convey to your mind a better idea of my meaning than I can by the pen.

In some situations there is a superabundance of alkali and silica—in others just the quantum needful; and in others a deficiency. These propositions I think I can explain to the satisfaction of you and your readers. Upon the banks of a small river running through this town, there is frequently a strip of land one or two rods in width, and sometimes several rods in length, a few feet above the bed of the river.—Upon every overflow of the banks by a freshet, there is left upon them a deposite of gravel and fine sand; yet every year these strips produce a

tolerably heavy crop of red top grass, generally free from any mixture. When secured in good order for hay, it has every appearance of first rate winter fodder. Yet our cattle will not eat it unless nearly driven to the borders of starvation. Again, there is a similar kind of grass, only more wirey and jointed, growing upon our gneiss and granite ledges, and frequently quite a thick growth of it, where the soil is but two or three inches in depth; it is red top grass, but from its small and narrow leaf and wirey appearance, but few persons would suppose that it was the same kind of grass that was growing within six feet of it, where the soil was deeper. The grass on the river bank, from the comminuted and fine particles of quartz, feldspar and mica, takes on and in such a quantity of silica, that it is hard and difficult to masticate, and probably it is not so nutritious as if grown where there was more vegetable matter in the soil.—That upon the ledges, the roots of the grass rest directly upon the rock and decompose it: this contains more silica, and is harder than that upon the river bank. This establishes my first proposition.

There are other situations where all the necessary constituents for a perfect developement appear to be rightly balanced. With such spots all our farmers are familiar. They are found wherever the wash from rocky or gravelly roads is carried over grass lands, the wheels of carriages and travel on the road are continually grinding to powder the component parts of stones and rocks in the road, which renders their salts soluble. This with the animal and vegetable matters are sprayed over the ground by every heavy shower; the result is a heavy crop of grass. Herdsgrass in such places is frequently found four or five feet in height, standing perfectly erect till mowing time, and affording palatable and nutritious food for cattle.—This I offer to sustain my second proposition.

My third was, that there were others, where there was an absolute deficiency of potash and silica, but an abundance of nutritious matter. Where a piece of land has the wash of a barn, the grass starts early in the spring, and bids fair to yield a great growth of grass; but for want of stamina it frequently falls or lodges before it heads out, and when made into hay it will weigh light according to its bulk: much of this is occasioned by a deficiency of silex. The same results are frequently exhibited on reclaimed meadows, where there is a great amount of decaying vegetable matter. A compost of manure, with a large quantity of ashes and fine sand, is the rich dressing for such spots.

When the primitive growth of wood on our new lands is felled, and burnt upon the ground, and there is sometimes two or three hundred cords per acre, and none of the ashes carried off, we almost invariably obtain a heavy crop of wheat or rye. I have known of more than 50 bushels of wheat or 60 bushels of rye per acre on such lands. The intense heat shivers up the rocks: the great amount of alkali readily dissolve the disintegrated rock, and, in its soluble state, it forms a stiff stalk, with a hard, thick glaze upon the straw, which prevents the rupturing of the sap vessels; the sap, instead of oozing out upon the stalk and rusting, is carried to the head of the grain and fills it with a heavy, plump kernel. The crops of grass that follow for several years correspond with the grain crops, but ultimately the vegetable matter is used up, and nearly all the soluble potash is used up—so that the farmer must resort to the plough, and manure to get a fair crop again.

Every practical farmer who has attempted to raise wheat on highly manured land that has been long cultivated, knows that it is liable to lodge, and very frequently rust or mildew.—These two evils might, I think, be nearly remedied by the application of the right amount of ashes—if that *right* amount could be *ascertained* and *obtained* by the farmer. As to the amount, he need not fear of getting on too much, if he will reflect how much is left upon an acre of burnt land, where two or three hundred cords of hard wood is converted to ashes; but in all probability a *very* much less amount would answer. I conceive there is but little difficulty in any or every farmer's obtaining his supply, by ploughing up a small patch of sandy or gravelly sward land and letting the furrows remain till dry, then commence a fire, with a small quantity of wood, and gradually pile on the sods, and very large heaps may be thus converted to ashes. The vegetable matter would be burnt, the particles of quartz, feldspar and mica would be broken and shivered thereby, rendered soluble, and afford those very salts so essential to a good growth of grain. After the mass had become cool enough to be removed it should be put under cover, to be applied to his wheat ground, after being ploughed in the spring. In all probability fifteen or twenty cartloads would have the desired effect, and the good effects would also be felt for several years by the succeeding crops.

Frequently promising crops of wheat are almost entirely destroyed by rust. On highly manured lands, if there happens to be a day or two of warm, steamy, good corn weather, in July or August, at about the time wheat is in the milk, the rush of sap is so great, that if it do not produce apoplexy, it does that which is nearly as bad—it ruptures the *tender* and *inefficient* coating in the stalk; the sap vessels burst; the sap exudes, and forms a coat of rust, and the crop is nearly ruined. In some of the agricultural papers the last year, I read an account that wheat never rusted where it was sowed upon an old coal heath, and that grass and other crops always succeeded well and were luxuriant. I think this was attributed to the remains of the charcoal; but perhaps a part might be justly attributed to some other cause—to its furnishing a thicker coat of glaze to the grain, and preventing the rupturing of sap vessels.

I might cite a great many more facts in addition, to satisfy any one of the benefit of adding to our cultivated soils, potash in a more soluble state than we find it, as locked up in sand, gravel, stones or rock. You will find some of them in Mr. Colman's 4th Report, viz: Mr. Hagger-ton's compost of peat and barilla; Mr. Jarvis' account of glass factory manure; Mr. Whipple's statements in regard to the value of saltpetre or nitre—that being about one half potash; 102 lbs. of nitre contains as much potash as 79 lbs. of pot or pearlash of commerce. He applies about 105 lbs. to the acre.

But ashes are also useful in agriculture for neutralizing acidity of soils, and for the formation of nitre or saltpetre for agricultural purposes.

In the 6th number, (June, 1842,) of the Farmer's Monthly Visitor, there is taken from the "Albany Cultivator," an article or review of Dr. Dana's Muck Manual. In this article there is a statement made by the Doctor, and another by the reviewer, which I think are calculated to lead to erroneous conclusions. The Doctor says, his first principle in agricultural chemistry is "one rock and consequently one soil:"—from this he lays down his second principle, "that rocks do not affect the vegetation that covers them." The reviewer says, that "rocks certainly exert a powerful influence on the soil that covers them in many cases," but this he says, "is owing to their *physical* condition, and not to their *chemical* constitution." Now, I think, to the mind of every farmer, the plain English of the above would be this: all soils are derived from rocks; all rocks are chemically the *same;* ergo, the chemical constituents of rocks never affect vegetation.

For the sake of many of our farmers, I wish the above was true; but the weak and sickly appearance, and light and short crops of corn, we every year see growing upon soils containing sulphate of iron—iron pyrites, or what farmers more commonly call brimstone rocks, proves the above untrue. There are six thousand of acres of land in this State, that once yielded heavy crops of corn, that now with a dressing of fifteen or twenty loads of manure will not give more than the same number of bushels of corn, and without manure it would not yield five bushels per acre; and this decrease in the amount of crop is almost wholly in consequence of sulphurous or sulphuric acid in the soil, derived from the disintegration of rocks containing sulphur and iron. Hundreds of our farmers have dug solid and heavy rocks from the soil, and laid them into wall, and soon the oxygen of the air and water combines with the iron, and it is decomposed and converted to an oxide or rust; this sets the sulphur free, and that combines with oxygen and forms sulphurous or sulphuric acid, according to the amount of oxygen in combination with the sulphur. This renders the soil acid, and unfortunately the more this land is worked by the plough and harrow, the worse it is, by exposing the stone more and more to the action of the oxygen and eliminating increased quantities of sulphur.

When corn is planted on lands containing this acid, derived from such rocks, it generally looks well and promising for a few weeks, at least as long as the plant draws its nourishment from the decomposing kernel. But after the rootlets on the main roots are formed, and they begin to fulfil their office, by absorbing water from the soil, a re-action takes place and the plant remains stationary for several weeks—the leaves assume a reddish purple color, the main root is corroded or rusted off, to the length of one or two inches, and the farmer generally lays all the blame to worms, while in fact, there may not be a dozen in an acre. After a while a new set of roots start out at the lower joint, but so few and weak, the crop is light, and a large portion of the corn in attempting to cut it, is pulled up at harvesting by the sickle.

I think upon inquiry among farmers having land containing this kind of rock, you will find hundreds that will confirm my statements.—Here the inquiry may arise, is there any remedy? Yes: unleached ashes will neutralize the acidity of such soils, (precisely as salæratus does sour dough,) by combining with the free acid of the soil and forming a neutral sulphate of potash. But I have my doubts about plaster of Paris being useful on such soils, for it is composed of 40 parts sulphuric acid, (oil of vitriol,) and 28 of lime; but the acid is neutralized by the lime, and therefore inert. But reasoning from chemical principles; if we apply to such soils, hydrate or slacked lime, it will combine with the acid of the soil, and the lime will be converted into sulphate of lime—plaster of Paris—and thus remove the free acid from the soil, in the ratio of 40 lbs. of acid to 28 lbs. of lime. It can also be remedied by *very* heavy dressings of manure; but that is not always within the reach of the farmer.

"It is well ascertained that different soils have different properties; prejudicial to the growth of some plants, and favorable to the perfection of others; and it would be a most fortunate circumstance if these differences in the properties of soils were better understood, and more generally acted upon by the great mass of farmers. Notwithstanding the bad character I have given soils containing sulphur in excess, for growing corn, and for many other crops it is equally prejudicial, yet is peculiarly favorable to the perfection of others. In Jones' Conversations on Chemistry," page 136, speaking of sulphur, he says, "it exists in some vegetables, especially those of a *cruciform tribe,*" that is, the tribe of plants consisting of cabbage, turnep, mustard, raddish and cress, of every variety. In some respects this family of plants possesses peculiarities contained in no other tribe.

In the December number of the Genesee Farmer, page 185, there is an extract copied from the Farmers' Journal, England, on soils, by William Chatterly, from which I make the following extract:

"The state of chemical combinations in which the various ingredients of the soil are found, also materially *influences* its fertility, though such combination should differ somewhat for particular crops: for instance, wheat requires that a portion of *silica* should be in un-

ion with *potash:* and for clover, that *sulphur* should exist in the soil in the condition of a soluble sulphate. In confirmation of the above theories, I will relate a few facts that have come under my immediate observation. In 1837, I came into possession of an old farm that had not a furrow plough on it for 20 years. In one of the fields there were 12 or 15 acres that had been yearly mowed all this time, and did not average 5 cwt. of hay to the acre. Many of the rocks and stones in the soil were of the 'brimstone order.' That spring I ploughed about an acre and a half; being, as far as I could judge, the best land of the field, manured with about 20 loads of manure; something over an acre was planted with potatoes, the rest with corn. From the friable appearance of the soil, and the long time it had lain in grass, I expected to have raised a good crop, but in July and August, I observed many of the tops wilted and dead. Upon examination, I found the stalks from the surface of the ground to their roots, entirely corroded or rusted off by some cause to me then inexplicable. I think the crop was less than eighty bushels per acre. The part planted with corn amounted to nothing except for fodder. The next year ('38) all except one-tenth of an acre was manured with about four cart loads of coarse manure, ploughed twice, and sowed with ruta baga about 20th June—harvested 1st November, trimmed close, and accurately measured, and the yield was 100 bushels—or 1000 per acre. In '39, the produce of turneps was very good. The years '40 and '41, in consequence of drought, the turnep seed mostly failed to vegetate, and what few did, the insects destroyed.—The past season, ('42) I planted three small pieces of land with squashes and pumpkins. They were destroyed by the black bug: one of the pieces was set out with ruta baga plants in July; several very warm days succeeded, and the tops were killed to the surface of the ground; and it was many days before they showed any signs of life. When they were harvested in November, many of them were the largest turneps I ever saw. The other pieces were sowed late in July with English turnep seed by merely hoeing them in, and nothing farther was done to them till they were harvested. The product was nearly twenty bushels of as fine turneps as ever I saw. I cannot doubt but the sulphur in the soil exerted a beneficial influence upon the growth of the turneps."

My experience of four years in cultivating clover upon this kind of land, fully confirm Mr. Chatterly's statements; but from the length of this paper I must forbear to go into particulars.

The opinions I have expressed in this communication I trust are correct; what I have stated as facts, I believe are so, but if I am in error, I shall be happy to be set right, as I have no favorite theories that I wish to establish at the expense of truth. LEVI BARTLETT.

Warner, Feb. 1843.

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Mr. Bartlett's Agricultural Essay, which will be found in this paper, is a masterly production, distinguished alike for sound sense, science simplified, and practical knowledge. It should be *studied* as well as read.—*Amer. Farmer.*

New Reaping Machine.—The editor of the Richmond Compiler was present a few days since at an exhibition of a Reaping Machine, invented by Mr. McCormick, of Rockbridge, Virginia, the operation of which he thus describes in a recent number of his paper:

The machine, placed on small wheels, was moved by two horses around the rye field in which the exhibition took place, at a quick pace, making a clear passage through the grain as it moved, about five feet wide. This it did with a completeness which it is impossible for the cradle to accomplish. This machine would effectually destroy the vocation of the "Gleaner," who has been in times bye-gone, the subject of many a pretty story or pleasant poem. The wheels of the machine keep in constant motion a saw, with edge and teeth not unlike a reap hook, which saws down the grain as it is bent and forced against its edge by a revolving apparatus, resembling a seine reel. The grain falls upon a bed or platform just behind the teeth, whence it is raked by hand. This raking of the grain away is the most laborious part of the process—so rapidly does it accumulate that it is difficult to keep it properly cleared.

AGRICULTURAL SOCIETY.

Mr. Editor—I discover in your paper of the 20th ult., that, after giving some account of the Agricultural Fair of Adams county, Mississippi, you suggest the propriety and importance of organizing an agricultural society for Morgan county. I thank you for the suggestion, and hope that your efforts to promote this most important branch of industry will be *tangibly* appreciated by the public.

I have long wished to see some movement made by which our people might be awakened upon this subject. I have, therefore, concluded to submit a few reasons in support of the suggestion you make. Morgan county once sustained double her present population, and supported it profitably to the occupants of her soil. Why is this? Her territorial limits have not been contracted. The answer is an easy, though a very melancholy one: one acre of her soil would then produce what three will hardly do now. The consequence is, that our population is yearly decreasing—many of our most valuable citizens are leaving us, and are going in search of more productive land.

Can these things be remedied? I answer, that what has been done in other places is, at least, worth the effort with us. We know that in many portions of the world, so far from exhausting lands by cultivation, they actually enrich them yearly. The truth is, we have been spoiled by having had allotted to us by the Almighty a rich freehold—well adapted to the culture of the great staple of this country. Like a profligate heir, we have been reckless of our inheritance, till we begin to find, like him, that the best estate may be ruined by perpetual drafts on and none in favor of it. Let us then profit by experience, and begin to husband our remaining resources, and try to regain by a well organized system, what we have lost by the reckless prodigality of our soil. We have every inducement to improve our lands; in the first place we have a soil highly susceptible of improvement—our lands being mostly based upon good clay foundations; and again, our county occupies a position in the State in point of locality, which, with its health, temperature and good pure water, will make it at all times a desirable place of residence, and will not only induce our population to remain, if properly cultivated and improved, but will induce others to come amongst us. These are reasons of a local character. I might, if I did not fear of trespassing too far upon your limits, give many more of a general character. I will, however, submit but one or two: I think it could be demonstrated that, by adopting a system of cultivation, by which we retain what soil we have, and augment and improve the same by the proper collection and application of manure, we shall not only add yearly to the value of our lands, but produce more profitable crops.

Again, it is melancholy to look upon any thing, animate or inanimate, in a state of decline—hence, you will always find more of energy and vigor in a newly settled community. Every thing there has a tendency to buoy up and give elasticity to the spirits. Well, if this be true, what must be the effect produced upon the mind of the way-farer, who jogs up and down our high way (and especially if he had traversed the same path some twenty four years ago,) where once stood the poplar, the walnut and the red bud, he beholds now the deep-washed gully, with here and there a patch of broom-sedge, and, per chance, a bunch of the blackberry-bush, that has taken sustenance from the decaying roots of some friendly stump, or that of some vagrant log. No wonder you hear so much complaint of "blue devils." But lastly, the system of cultivation (or of land butchery) hitherto pursued in the country, has been such as to hold out but one solitary inducement to embark in it, to wit: the profits in dollars and cents, and that is now pretty well over. How often have you heard the young man say, "I can't think of planting—I've taken too much pains with my education to busy myself in that way." Hence the learned professions are all overstocked, and loafers "abound in the land." The truth is, that a young man of cultivated mind can find nothing to facinate in our farming, because we have neither science nor system in it. The most ignorant African could have the advantage of him, for he *would* have some experience. How desirable, then, so to improve this, the support of all other professions, as to allure the talented and enterprising to its embrace; to sweeten labor by converting drudgery into scientific experiment, and so stamping mind upon the laws of nature, as to bring up, out of our present confusion, the most beautiful system. I will not extend this article by way of giving reasons why an organized society will be necessary to the promotion of the objects here spoken of—they must be obvious to every one. I will suggest a meeting of the planters of the county at some early day to take the same into consideration, that a society may be organized; and I think of no time more appropriate than the Anniversary of our National Independence.

PLANTER.

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Mr. Editor—Your correspondent "Planter" suggests the importance of an Agricultural Society for Morgan county, and gives us some of the reasons that should influence our people on this subject. I most cordially agree with him in the views which he has taken, and would now add a few additional remarks. That the *subject* of agriculture is one of importance, demanding our first attention, and our best efforts, is a truth as palpable as it is of profound interest to our well being in society. The *first* employment of the *first* man was the cultivation of the earth, and his first descendants were not too *proud* or too *lazy* to imitate the example of their great progenitor; nor have some of the *first men* of our day deemed the *subject of agricultural science* too little and grovelling to engage brains that teem with scientific lore.

If the importance and utility of the subject would then command our first attention, why not secure every and all the means that shall lead to the most triumphant results? If agriculture be purely practical, then let us lend our physical energies to its attainment; but if it be both theoretical and practical, why then let us collect the various theories and practices of men of diversified acquirements and varied locations of country, as well as a difference of soil and climate. I ask, now, how can all this be effected better than by the formation of an Agricultural Society? Here we occasionally meet and tell over our enterprizes with our dear old mother earth—we recount to one another our fraternal kindness, and tell of the food with which this mother was fed—how artfully we succeeded in the preparation of her nutriment—how we regaled and electrified the old matron when we dosed her with our gaseous compounds, and made her joy so extatic that even heaven poured smiling tears upon her, and she, in the exuberency of her joy, bestowed upon her sons the golden treasures of corn, and cotton, and wheat, and all that could fatten and make alive the animate creation.

It is, thus, by mutual interchange of opinions, that we form conclusions and arrive at truths that are of practical importance to mankind. It is in this way that the agriculture of England and Scotland, Germany and France, have attained its present elevated and enviable state. It is by knowledge diffused through Societies, in this way, that processes once considered difficult and mysterious are now made familiar to all. We hold converse in an Agricultural So-

ciety with Sir Humphrey Davy, Chaptal and Liebig, and are made to know how chemistry and her kindred sciences subserve the purposes of man, and how the various manures are prepared and assimulated to the wants and perfections of the vegetable kingdom. We thus, in a word, learn by associations of this kind, to combine and concentrate scientific agricultural knowledge to all the practical purposes of life.

But, again: an Agricultural Society would stimulate us to action—first, by reading works connected with the subject; secondly, by the carrying out of any theory that we might regard as useful; thirdly, by an actual exhibit, before the Society, of what had been the result of our labors, and lastly, by the pleasure that we would derive from having premiums awarded to those most skilful and successful in their operations.

But again, sir, I have long looked upon our community as destitute of that source of rational enjoyment in which all might be participants without a sacrifice of moral feeling or moral principle; now, here, at a well regulated Agricultural Fair, held annually or semi-annually, it seems to me all might participate in the joys and festivities which could be thrown around an occasion like this. The sage farmer of sixty years, and his son of twenty, with the dignified old matron, and her daughter of blooming sixteen, with all the other avocations of life, might assemble here, and whilst this sage farmer would tell you in strains the simplest of the simple, how it was, under the blessing of God, that he ploughed up his soil, and applied his compost manure, and reaped his harvest of gold; the aged matron, with her fair daughter, would tell how it was that she succeeded so well in the brilliancy and permanence of those colors that made her domestics the gaze and universal admiration of all around. These recitals would tell upon the youth of the country, and catch their admiring gaze, and thus they would discover something in agricultural pursuits that would be *attractive.*

If we look around us we must come to this conclusion, that if any country upon earth deserves to be improved, we have that country.—We are indebted to improvement upon two counts; first, by butchery and then murder, we have ruined one of the best portions of the habitable globe, either directly or as accessories after the fact, and are, therefore, bound for its restoration; and secondly, as good stewards, we are bound for the improvement of the talents committed to our charge. We could not, therefore, occupy our county, as it was *originally*, without being under obligation to its improvement; and just here I know we do not feel this moral obligation, or else we would be doing more than has heretofore been done in this important matter. The question now arises, how can this improvement be effected? I answer, by Agricultural Societies, as furnishing information and offering stimulants to the community in this great and laudable enterprise. But, says one, all these Societies are alike—a mere *bragological humbug*—a safety valve through which a few loquacious, babling, senseless dolts may pass off their steam, and there the whole machinery stops. Well, I admit the force of the objection, (for it has force,) but if in letting off the steam it should drive a few men to action, through whose instrumentality our national wealth shall be increased a few hundred bushels of wheat or corn, then the Society will, at least, have done no harm; and if in this day of "humbug" no *harm* is done, we shall deserve commendation at the hands of our countrymen.

But, sir, I am almost deterred from sending you this communication, and why? Because it is too true that those who talk the most usually perform the least, and that we scarcely see blended in the same man many words and many actions; hence, sir, I may anticipate the charge of being an agricultural writer, without being an agricultural worker or producer. But to be more serious on this subject, I ask what are we doing, or do we believe that any thing can be done, to improve our lands? Have we determined upon any system of farming, and have we begun even with our acre of land to carry out this system? Have we made any preparations about our barn yards for manuring? or have we determined that it is *easier* to call in the neighbors and move the barn to a new place, than to go to the trouble of moving the manure from around the barn? Is there any thing to be learned from the age in which we live? If so, where shall we go, and how shall we learn it? Must we rely upon no other sources than our observation and experience for all the information we desire? You perceive these are questions of importance, and mainly connected with our interest and future prosperity.

I would suggest, sir, that a meeting take place preliminary to a meeting on the 4th of July, at which meeting a constitution and bye-laws could be prepared and then submitted to the subsequent meeting in July. The time has arrived when, I think, our farmers are ready for a Society, and will respond to a call made on them at any time and place. PLANTER No. 2.

Southern Miscellany.

AMMONIA.

Since the publication of Liebig's work on vegetable chemistry, it has been assumed that the ammonia constituted the most valuable part of stable manure. To arrest and retain this volatile gas, then, has been the great desideratum. The use of plaster, the sulphate of lime, has been recommended for this purpose. It is advised to be strewn over the stable litter before it is removed from the stall. In this case, Liebig says, a double decomposition will take place, from which will result sulphate of ammonia and carbonate of lime; by this means the ammonia will be retained in a soluble shape for the use of plants. Mr. Patridge, of New York, who proclaims himself a practised and experienced chemist, denies that any such action will result from the combination, at atmospheric temperature. Now, *non componere lites*, that is not for us to decide when doctors disagree.—But we see it recommended, possibly by way of settling this vexed question, to scatter common salt on the dung heap, or to water the litter of the stalls well with strong brine, an hour or two before removal. From this mixture result, it is said, muriate of ammonia and carbonate of soda. In noticing this suggestion touching the salt, the editor of the American Farmer, whose practical experience is worth a hundred theories of the most learned chemists, says,

"We are not chemist enough to avouch for the action of salt in the manure heap as above described; but this we can state, that some years back, we bought twenty barrels of rotten fish to use as a manure for corn. In each of these barrels there were about half a bushel of fish salt, of course highly charged with the oil of the fish. After using the fish in the hills of corn, one to each, we mixed the salt with ten loads of barn yard and stable manure, suffering it to remain a few days, when we turned it over with the shovel and gave it a more thorough mixing. We then hauled it out to the field, and spread it on one half an acre; on an adjoining half acre, we spread ten other loads of the same manure, but unmixed with salt. We ploughed up the piece of ground and planted the whole in corn. The half acre of corn planted on the ground fertilized with the salted manure, grew from the start more luxuriantly, looked of a darker green throughout the season, and yielded more grain than that on the adjoining half, though the soils were precisely alike, and each had received the same quantity of barn-yard and stable manure, and the same culture. The blades on the salted part maintained their greenness until pulled, although those on the other part, when pulled, were considerably *fired.* It is here worthy of remark that the ears on the former were some days later in hardening.

"We have stated the above fact, and without refering the result of our experiment, at the time, to any chemical combination between the salt and the ammonia of the manure, we were induced by our observation of the effect produced, to conclude that the *salt* used, had imparted to the earth the *capacity of attracting* from the atmosphere more moisture, as well as that of preserving it longer from the evaporating influence of the sun's rays; for the surface of the earth always looked, and was, in fact, much more moist than that of the contiguous piece of ground. What we looked upon at the time as unevaporated *dew*, may have been the *ammonia* abstracted from the atmosphere, and fixed thro' the chemical agency of the salt upon the surface, and there made to await absorption by the earth, thence to be taken up by the roots of the plants as nutriment. If this union takes place, and we have no right to question it, for the result of our experiment would seem to corroborate the assumption, SALT must form a most valuable acquisition to the dung heap, as any substance not too costly, which can give fixedness to the eliminating properties of manure—which can prevent the escape of the rich gases—must operate greatly to the advantage of the husbandman, because it would impart to his fertilizing materials, a degree of durability which alone they do not possess—and this property of salt, we should think, would be greatly increased in value, in sandy and other porous soils, where, as it is known, the effects of manure are much less lasting, owing to the escape of its volatile parts.

"But whether the chemical action imputed to the salt be as stated or not, we have no hesitation in affirming, that every farmer who can afford to incur the cost, should procure a few bushels per acre, to mix with his manure intended for his corn ground, as it would prevent injury from the cut and grub worm, as was proved by our experiment; for although the corn on that portion of the ground where the unsalted manure was used, suffered greatly from the ravages of these enemies, that on the part where the salted manure was used, escaped without any injury from them.

"The quantity of salt used by us was greater than we recommend. It was at the rate of 20 bushely per acre; having it, we used the whole as stated; but we think that five bushels per acre would have answered equally well for the time being. In other experiments which we have made with salt, in sowing it broadcast over turnep ground, after it was manured, plowed and harrowed, we only used six bushels per acre, and witnessed the finest effects from it on a corn crop grown on the ground the succeeding year."—*Southern Planter.*

REARING CALVES.

Messrs. GAYLORD & TUCKER.—I maintain that the way nature points out for animals, is the most proper for them. At any rate, if a calf sucks from a cow half that she gives, it benefits him more than though the same be fed to him. Of this I am positive. We generally take a cow that gives a good mess, and let two calves suck her, and they frequently get quite fat with this chance, seem to wean better, winter better, and make thriftier cattle than those we never let suck. Around the bars of the calf pasture, you can easily make a pen with four or five boards and a few stakes; stick the stakes one or two inches apart; put a pin through them for the board to rest on, so high that the calves can run under them. Let me use this pen, and you may use your stool, and I will feed ten calves my way, quicker and better than you would two the old way, by milking and feeding in a pail; and I think my cows would give the most milk too. A couple of calves striving to get more milk every time, I think would have a tendency to increase the quantity, or else nature has not provided for this emergency as she has for other ones.—*Albany Cultivator.*

TO PREVENT THE FLAVOR OF TURNEPS ON BUTTER.—A little saltpetre added to the cream just before churning, will prevent the disagreeable flavor arising from the feeding of ruta bagas.

REPORT

Of M. Dumas to the French Academy on M. Boncherie's process of preserving Wood.

TRANSLATED BY EDWARD TILGHMAN, C. E.

The Academy having charged M. M. Arago, de Mirable, Poncelet, Gambey, Audom, Boussengault and myself, with the examination of the memoir of Dr. Boncherie on the preservation of wood from decay, we proceed to the accomplishment of this duty.

The Academy has already beheld the preparations of the author with so great an interest—it has, at this moment, such remarkable specimens of the process before its eyes—that the labor of its Committee, in some respects at least, is greatly abridged.

Dr. Boncherie proposes te render wood much more durable, to preserve its elasticity, to prevent its warping from alternate exposure to dryness and moisture, to diminish its combustibility, to increase its tenacity and hardness, and, lastly, to give it colors and even odor the most various and durable. All these requirements are obtained by novel, simple and economical means, and by the aid of common and low-priced materials. To impregnate an entire tree with the proper coloring, or preservative material, our author has recourse to no complicate mechanical means; he avails himself of the natural suction of the tree itself, which is sufficient to raise from the base to the highest branches, the liquids he wishes to introduce, provided that they are maintained at a certain degree of concentration; thus, when a tree is severed from its roots the end is plunged in the liquid you wish it to imbibe, which, in a few days, ascends to its topmost leaves and pervades the whole vegetable tissue. It is not essential that the tree should retain all its branches or leaves—a few branches at the top is sufficient to induce the necessary suction; neither is it requisite that it should always be preserved upright, which would often render the operation impossible.—Having cut it down and deprived it of its useless branches, the butt is then placed in contact with the liquid to be absorbed, which penetrates the wood in every part. Finally, it is not even necessary to fell the tree, for if a cavity be excavated at its base, or a transverse saw cut be made through a portion of the base, it will afford sufficient contact with the preservative liquid, and the absorption will be as rapid and complete as before.

The impregnation which is thus affected in a short time, without trouble or expense, will be found to be a different process from those hitherto made to impregnate wood already cut, have been effected by the action of the most powerful machines, or by the prolonged effect of the liquid in which it was submerged. The novel and ingenious process recommended by Dr. Boncherie subjects to human industry an immense natural force, and permits it to introduce without labor, into the most delicate vegetable tissues, any soluble substance it may be thought useful to place there. If our author has solved the grand problem he proposed to himself in the most simple and practical manner, he has not evinced less sagacity in the choice of materials necessary to produce the desired effects as to preservation, &c. To increase the durability and hardness of wood, and to prevent the wet and dry rot, he introduces into its pores the pyrolignite of iron: this substance is chosen because it is produced by pyrolignious acid, which is to be obtained in any forest where charcoal is made; this acid is easily transformed into pyrolignite of iron by putting it in contact, even when cold, with old scrap iron. The liquid thus prepared is replete with creosote, which, of itself, without the salt of iron, hardens and preserves wood as well as defends it from the attacks of insects.

Official experiments have been made at the fungus pits at Bordeaux upon hoops (circles) prepared by the author, which have resulted in establishing, in the most triumphant manner, the great durability of wood thus embalmed.—The unprepared hoops crumbled to pieces at the least touch, whilst the others were as sound as when first placed there. To prevent the warping of wood, to preserve its elasticity and diminish its combustibility, our author has recourse to the use of the chlorides which have nearly the desired effect. Fully impressed with the conviction that his process must shortly come into universal use, he is not content with the chloride of lime, already so cheap, he has experimented upon the sea water of the salt marshes, a costless material, in which he has found all the desirable qualities. Wood prepared with these saline solutions, preserves its flexibility when exposed to the air many years; in their strips it may be bent and rebent the contrary way in a spiral without breaking; neither will it crack or warp from the greatest extreme of dryness. Lastly, it will not burn, or, at least, with such difficulty as to be easily extinguished.

To these great and useful properties, which the naval constructior and civil engineer will appreciate and profit by, our author has added others, which, without being so importantly useful, promises to afford new methods and materials to the arts. He colors wood in clouds so various and so beautifully curious, that the cabinet maker will find it to his advantage to use the more common woods in lieu of the more costly. The specimens of these preparations now before the Academy relieves us from all detail; it will be sufficient to observe,

That the pyrolignite of iron, when used by itself, produces a brown tint of the same color with those knotty parts of the wood where the liquid cannot penetrate.

When the pyrolignite is succeeded by any tanning liquid it produces ink in the body of the wood, and we obtain, by these means, a blue-black or grey. A Prussian blue is caused by the absorption of the pyrolignite immediately by the prussiate of potash.

By introducing successively acetate of lead and chromate of potash, the yellow chromate of lead is produced.

We may produce the most various and beautiful effects by introducing simultaneously the pyrolignite of iron, the prussiate, the acetate of lead and the chromate of potash, which cause blended clouds of blue, green, yellow and brown.

Thus we find our author does not confine himself to the introduction of one liquid only, but causes many to enter the same vegetable, and thus produces any modification of color he may wish; these solutions, causing such diversity of color, may be varied almost to infinity. Chemistry is rich enough in reactions of this kind to satisfy the most fastidious caprice. We will not here speak of rendering wood odoriferous by impregnations of this nature; it is an application too easily understood and too much confined, to mere luxury to compare in importance with the more useful details already given.

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The remainder of the report is omitted as containing nothing of interest to the general reader; the rival claims M. Millet D'Aubenton to the honor of the discovery are mentioned, and very shortly exploded, and the report concludes by recommending that the Doctor's memoire be published in the Recueil des Savans etrangers. —*Southern Miscellany.*

CURE FOR MANGE IN SWINE.—A correspondent of the Maine Farmer says:—Take raw tobacco, steeped in cold and strong chamber ley, pour off the clear liquor, then mix it, equal parts, with lamp oil, and then rub on the composition. It is a safe and sovereign remedy for mange, in all stages and all animals, brute or human.—This ointment, if kept in a tight bottle, will keep good any length of time. It should be well shaken together when used, for the parts soon separate when standing.

TO CURE SCRATCHES IN A HORSE.—Wash the legs with strong soap suds, and then with beef brine. Two applications will cure the worst case.—*Cent. N. Y. Farmer.*

RYE TURNING TO CHEAT.

LA GRANGE, N. C., May 25, 1842.

Messrs. EDITORS—I have taken a seat at my writing table to assert a fact or principle in nature, which I have heard disputed time and again; but I think I shall be able to corroborate my assertion with such evidence as to convince the most sceptical—but to the subject. During last summer I fallowed two acres of land adjoining my meadow, for the purpose of sowing rye. About the last of August I sowed the rye, and ploughed it in with gophers, and then harrowed it over, and it soon came up very thick. However, it grew off well and covered over the ground nearly before cold weather.—Thus it remained until in January, when the weather was so warm that the rye started out and seemed to be on the eve of jointing, but the cold weather that came on in February checked it and killed some of the under blades, but it did not appear to be seriously injured until our *March winter*, after which I noticed that nine-tenths of the bunches were without the least appearance of life, and remained so about a fortnight, when out of these *death-like* bunches there came very luxuriant young rye, (as I thought,) and continued to grow finely, but it did not seem to keep pace with the scattering rye that was not killed out by the freezes; I therefore turned my horses on it for the purpose of eating off the forward bunches, so as to make it more evenly; this being effected, there was no more grazing done on it for some weeks, when to my utter astonishment I discovered that all the bunches that had been seemingly killed was producing CHEAT instead of rye. Now, here is the case,—the rye being sowed very early, was rapidly advancing towards maturity before it was overtaken by the cold weather, which held it in check until that very remarkable warm weather in January, when it put forth as if winter had been over; then the cold of February and March completely destroyed the germs of all those bunches whose roots were still alive, and afterwards put forth suckers, which is the cheat, for I, in examining, found a bunch, (which was from one grain of rye,) with rye and cheat both proceeding from the same root, and the blades of the cheat are broader than I ever saw before, and have somewhat the resemblance of rye, some of which are ⅝ of an inch in width, &c.

I noticed an editorial article in the last number of the Advocate, relative to the blast in oats, which embodies good sound ideas, no doubt.—But my experience on that subject has confirmed me in the following notions, as relates to the cause of smut or black heads in oats, as well as the remedy to arrest or dissipate that disease.—1st, sow ripe seed in due time, which is soon as the ground can be caught in order after the 20th of February; (for here I will take the liberty of saying that my oats were all sown and were exposed to the snow and freezings of last March, and I never had finer looking oats at this season;) those intended for seed should be allowed to stand until fully ripe, some three or four days longer than those intended for food. The seed oats should by no means be wet, or even damp, by dew or rain, when bound, but dry and bound in small bundles, and then housed or stacked before getting wet, if possible. The above is our course, and we seldom suffer any loss by the above mentioned disease in oats.

Yours, respectfully,

D. W. C. JOHNSON.

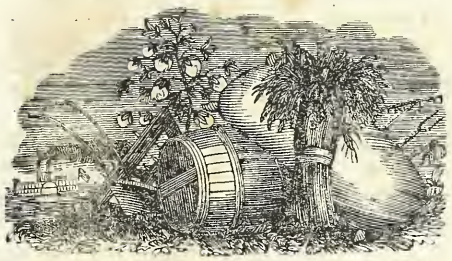
P. S. I believe the cause, or at least the prime cause of smut in oats, is cutting the seed oats too green; and also damages received by being over-heated in bundles or stacks. It is therefore of great importance to be very careful of the oats intended for seed. D. W. C. J.

REMARKS.—We know that the views of our correspondent, Mr. J., in regard to other grain turning to cheat, has in years past, been very generally entertained—but had come to the conclusion, that in this enlightened day the opinion was nearly exploded. We have no wish to be drawn into a controversy on the subject; but we would just as much expect to see peaches grow-

ing on coins produced from the stumps of an apple tree, as cheat produced by a grain of rye or wheat. And moreover, a premium of $100 was offered by J. J. Thomas, one of the editors of the New Genesee Farmer, about two years ago, for a specimen that would satisfactorily substantiate the fact of such change. We have not yet learned that the premium has ever been claimed, and we are not apprehensive that such a specimen will ever be produced.

We have no kind of doubt that Mr. J. is fully convinced that his rye was changed into cheat. But had he been as unbelieving as we are on that subject, he would, no doubt, have made discoveries that escaped his observation.

N. C. Farmers' Advocate.



WEDNESDAY, JUNE 21, 1843.

BACK NUMBERS.—All new subscribers to the "Southern Cultivator" can be supplied with the back numbers.

OUR VOLUME.

As the present number concludes the first half of the first volume, it may not be improper for us to say a few words to the friends of the enterprise. In entering upon the duties of publishing an agricultural work at the South, we were not unadvised of the difficulties we should encounter in prosecuting the labor. We are the pioneers in Georgia—the planters generally had not accustomed themselves to consult theories and to investigate the experiments of others in the pursuit of their labors—indeed, they had followed so long in the beaten track of their fathers, that we anticipated no little opposition, and not a few sneers at the introduction of what is usually denominated *"book farming."* We are happy to perceive, however, that the prejudices of a large portion of the people on the subject are rapidly dissipating, and we confidently believe that the day is not far distant when the great mass of our planters will be constant patrons of an agricultural paper. This feeling is daily manifesting itself by the continued and rapidly increasing circulation of the "SOUTHERN CULTIVATOR," and the interest which seems generally to be excited in its behalf. Indeed, we may almost assert that it is already placed on a firm foundation, and will certainly become one of the permanent agricultural periodicals of the country, such is its present prospects, which we confidently believe will be fully realised.—For its success we have to thank numerous friends in various sections of the country, who have interested themselves in its behalf; and particularly are we under obligations to the press, for the very flattering notices we have received from our brethren of the corps editorial, to all of whom we return our most sincere thanks. Although we are well aware that our little sheet is far surpassed by some of the Northern periodicals, whose facilities for publishing an interesting and valuable paper are much greater than ours, nevertheless the very flattering reception which the "Southern Cultivator" has met at the hands of Southern planters, while it gives earnest of the future, testifies, in the most grateful terms, the estimation in which it is held by them. And we sincerely trust we shall go on and continue to ingratiate ourself more and more into their favor, till we have attained the highest point of our ambition, the rendering the work among the most interesting periodicals in the country. This we will do if the planters will give us their countenance and support, for which we feel confident we shall not plead in vain.

TO CORRESPONDENTS.

In returning our thanks to our friend FARRAR for his communication in this number, containing as it does so many valuable practical hints, we avail ourself of the occasion to repeat what we have before said to our planters on the subject of writing communications for the press.—We know that very few of you are accustomed to write for the press, and you therefore feel some delicacy in doing so. This should not be—you do not hesitate to tell your neighbor, or even a stranger when you meet one, what you have accomplished by this or that experiment, or what improvement you have made by this or that system of culture. Then why feel any delicacy in telling it to every reader of the "Southern Cultivator," in the shape of a communication? We have before said to you, give us your facts and experiments, and tell them in the same easy, familiar style that you talk to your neighbors, and if you should happen to spell a word wrong, or write an ungrammatical sentence, we will make all these corrections for you and put it in ship shape. You need not, therefore, feel the slightest fears about your spelling or diction.

DOMESTIC SILK.

Accompanying the communication of Mr. CASSEDY, which will be found in this number, we received seven skeins of very beautiful sewing-silk, equal, if not superior in strength, to the Italian, and only inferior to the imported article in the lustre imparted in the dying and finish. Indeed, with such specimens of native silk as that now before us, we think it not at all extravagant to anticipate that the day is not far distant when the culture of silk will become an important branch of Southern production. It is yet in its infancy, 'tis true, and much has yet to be learned, but we doubt not that the enterprise and industry of our citizens will accomplish all that may be attained, particularly when we reflect that the low price of their great staple necessarily will drive many to seek some new enterprise for the distribution of their labor.—We therefore hope that those of our citizens, who have an opportunity, will continue to make experiments by way of testing its utility,—and we suggest to all who feel a disposition to make such experiments, to pursue the Italian system of culture rather than the French. The reason for this is very obvious—the climate of Italy is quite the same as our own, while that of France is much colder.—It is, therefore, important that we should adopt that system of culture which long experience has established in those climates approximating nearest our own.

CULTURE OF GAMA GRASS.

I feel much gratified by your excellent remarks on the subject of the Gama Grass, in your valuable periodical of the 19th April last. A practical knowledge of this plant for the last twenty years, and having given the first impulse to public attention towards it in the South and East, I feel some more than usual interest in it, especially as this acquaintance and experience compels a belief *that it is yet the most valuable grass for animals*, and for the interests of the cultivator of the soil, *considered in every point of view*, wherever the locality is found favorable, that is yet known. From the nature of the remarks that I have read regarding it, it is evidently ranked by some gentlemen amongst the coarse grasses. On this part of the subject, I must remark, that the degree of coarseness depends on the mode of cultivation, and the *stage* at which it is cut and used. At fifteen days' growth, I must contend that it is among the most delicate known, more nearly resembling the blue grass than any other.

Taking your judicious replies to the queries proposed as they stand, to the first I beg leave respectfully to add, that my first and so highly successful essay to cultivate this grass, was on a *fine* sandy land, with a red clay foundation, dark grey surface about six inches; although some of the finest specimens that I have ever seen are found on the low grounds of the Tombigbe, and the black rich limestone prairie lands of the Choctaw nation, in about 32½°.—Another splendid growth, say many acres in a body, is found in a state of nature, twelve or fifteen miles east of the Tombigbe, on the rotten limestone land, bordering a small creek.

2d query.—For a perfect cultivation of this grass, *trench* plough as deep as possible, previous to setting a piece of ground with this grass; let the largest bar-shear be followed by a proportionably large scooter, or bull-tongue plough; and, if possible, cross the land in the same way, recollecting this extra work is only once during a life time. Pay no attention to the foundation of your soil, but loosen deep. To prepare other land in the way to produce the most lasting and successful growth, I spread, previous to the first ploughing, a heavy coat of manure. I admit the cultivation will cause the manure to *sink*, but not half as *deep* as the *roots* will penetrate. At the second preparatory ploughing, I lime, if the soil is any other than rotten limestone land or prairie; I prefer entirely raising the plants on a bed and setting the land, as in the case of the tobacco plants, and set them fifteen inches apart every way. Here, it must be recollected, that the disposition of this plant to spread its roots, as well as to go down perpendicular, is such that at even two feet from plant to plant the cultivator cannot calculate on giving this field of it more than one ploughing, or two at most, the first and second year after setting out the plants, and indeed, during his life. This can be done safely the first and second year by running a bull tongue with a small mule, guided by a careful ploughman, between the rows, each way twice in the same tract. All after cultivation must be with the *pronged hoe*. With this tool, well made, a skilful hand will clean and loosen the ground at every hoeing nine to twelve inches.

Query 3d—Fully answered. 4th—Cut it with a sickle or scythe; what you cut, scatter as fast as cut, before *twelve* o'clock; if the weather is *clear*, turn over next morning after the dew is off the grass, and stack after 12 o'clock, sprinkling salt liberally while stacking, for hay cut every thirty days; not a grain of the salt used will be lost. 5th—After gathering the seed, throw them into a vessel, mixing with them any moderately moist sandy soil, keeping the vessel in a cool and rather damp place, until planting time. 6th—If perfectly cultivated for hay, this

grass must be cut every thirty days; or if for soiling horses, cattle or mules, the same age is proper, from the 1st May to the 1st November, in lat. 31 to 33. For a milch cow, to produce the finest of milk and butter, cut every *fifteen* days; it will then be found 24 to 30 inches in height; if cut monthly, from 36 to 42 inches high. After the first cutting, leave a few rows for seeding. 7th—Of *green* grass, the product, cultivated as heretofore stated, will be found from 150 to 250,000 pounds per acre per annum. At each cutting, loosen the ground between the rows with the hoes before mentioned; and to procure the greatest possible product, scatter manure after the *second* cutting. The relative value of this grass I was *compelled* to test. I cut it with a sickle, bound into small sheaves on the fore part of the day, after the dew was off, at thirty days' growth. With one of Mr. Eastman's cutting boxes I cut it up, say an inch in length; this was done for feeding in the after part of the day, and cut at dinner time, while the animals were eating, for night feeding. I gave each mule as much of the cut grass as he could eat, together with a tin cup full of Indian, rye and pea meal, strewn over it, with salt proportioned.

My oxen, engaged in hauling, I fed in the same way. I never had more or better work done, or healthier animals. The cutting of the grass in a lot adjacent to the stable was done during the time the animals were allowed for eating, nooning, &c.—no time lost.

In feeding with this or any other green grass, I add a small quantity of rye, oats, barley or rice, cut on the sheaf, and mixed with the grass.

Some farther remarks hereafter.

AGRICOLA.

South Alabama, 1843.

American Farmer.

HEAD AND HAND LABOR.—The Bangor Whig has the following excellent remarks on the subject of labor:

What honest vocation can be named that does not contribute, in a greater or less degree, to the enjoyment of men? It may be humble, indeed, but it goes to swell the mighty aggregate; it may be the rill that trickles from the mountain side, but it diffuses fertility through the valley, and mingles its drops at last with the ocean. The true American motto is and must be—marked upon our foreheads, written upon our door post—channeled in the earth, and wafted upon the waves—*Industry—Labor is Honorable*, and idleness is dishonorable, and I care not if it be labor, whether it be the head or the hands. Away with the miserable jargon of the political economists, who write so complacently about the producing and non-producing classes. It has no foundation in nature or in experience. Whitney, whose cotton gin doubled the value of every acre of land in the South, raised more cotton with his head than any twenty men ever raised with their hands. Let me exhort those of you who are devoted to intellectual pursuits, to cherish, on your part, an exalted and a just idea of the dignity and value of manual labor, and to make that opinion known in our works and seen in the earnest of our action. The laboring men in this country are vast in number and respectable in character. We owe to them, under Providence, the most gladsome spectacle the sun beholds in its course—a land of cultivated and fertile fields, an ocean white with canvass. We owe to them the annual spectacle of golden harvests, which carry plenty and happiness alike to the palaces and the cottage. We owe to them the fortresses that guard our coasts—the ships that have borne our flag to every clime and carried the thunder of our cannon triumphant over the waters of the deep.

FOR MAKING CLOTH WATER PROOF.—Immerse the cloth in a solution of Alum for 10 minutes, air it for 20 minutes, then immerse it in pulverised chalk.—*Cent. N. Y. Farm.*

DOMESTIC SILK.—This new branch of industry is fast becoming a profitable enterprise thro'-out the country. The Southern States are particularly favorable for the growth of silk—there being not only the climate in its favor, but an immense amount of unproductive labor on our plantations, which could be employed in the culture of silk, without distracting from the usual and legitimate business of the planter.—The children and aged persons, who now sit about "the quarters," and bake in the sun, might find it a pleasant enjoyment to rear the silk worm; and the planter would find it very beneficial to his purse. The silk business, however, recommends itself particularly to small capitalists. They would find it well worthy of their notice, as it presents the most profitable investment of mere labor, and may be successfully pursued with the smallest amount of capital. The process of silk raising is very simple; there are many farmers' wives who, with no machinery or chemical wares whatever, except what is found upon every farm, that manufacture sewing silk of a quality superior to any brought from foreign parts; and we would say that stockings knit from the silk are not only the most beautiful exhibition of domestic skill that can be seen, but the most durable and pleasant article of dress that can be imagined. A few ladies in the South have set the example of silk raising, and manufacturing it into articles of use. No one who visited the State fair at Baton Rouge last year, will forget some beautiful specimens of shawls exhibited by a lady of West Feliciana.—*N. O. Sportsman.*

THINGS TO BE REMEMBERED.

Horses should never be put to severe work on a full stomach. More horses are hurt by hard driving after a full feed, than by a full feed after hard driving.

If the farmer wishes to have his pork barrel and meal chest hold out, let him look well to his kitchen garden. Plenty of vegetables conduce not more to health than to profit

In laying in a stock of winter fodder for animals, let it not be forgotten that a little too much is just enough. Starving animals at any time is miserable policy.

As you treat your land so it will treat you. Feed it with manures liberally, and it will yield you bread bountifully.

Avoid debts as you would the leprosy. If you are ever tempted to purchase on credit, put it off for three days. You need time for reflection.

Never beg fruit, or anything else you can produce by the expenditure of a little time or labor. It is as reasonable to expect a man to give away the products of his wheat field, as of his orchard or fruit garden.

If you keep your sheep and cattle in your meadows until June, don't complain next winter because you are compelled to purchase hay for your stock.

The man who uses good seed, has a good soil, and works it in good season, rarely fails of having a good crop to reward his toil.

Never forfeit your word. The saying in truth, of any farmer, "his word is as good as his bond," is worth more to him than the interest of $10,000 annually.—*Albany Cultivator.*

SCAB IN SHEEP.—This, says the Genesee Farmer, is one of the most troublesome diseases to which sheep are subject. Its prevalence at times, is the cause of severe losses, particularly to those who keep large numbers of these animals, and to whom an efficient and speedy remedy is unknown. The following article on the preventive of this pest, contains sound advice, and as it is published over the gentleman's own signature, is probably entitled to regard:

"This being the proper time to give the information, I send you an account of the manner in which I treat sheep affected with the scab.—I recommend that sheep be put in a newly burned fallow as soon as possible after shearing.—People are careful to avoid the blacking of sheep, but I think it a sure remedy for the scab, and also for the foot rot. Let them have access to a piece of burnt ground as fresh as possible. Leave down the fence from the pasture, and tthey will invariably go a mile to get it for their lodging. Like patent medicines it cures all diseases. It is an almost certain remedy for the fly that produces the worm in the head. If sheep can have access to a piece of burnt ground, they are sure to make it their resting place day and night. It promotes the health of sheep and does no damage to the wool. Until late in the fall, I generally keep from seven to ten hundred sheep, and have tried the above experiment, and of late years let my sheep have access to fresh burnt ground, and they are remarkably healthy.

JOHN SPICER.

A SPLENDID FARM.—Mr. J. P. Cushing, of Boston, has expended on his celebrated farm of 125 acres, at Watertown, Mass., several hundred thousand dollars. The house now building on the premises is estimated to cost $125,000. It is calculated for a princely residence, with Chinese verandahs, windows of stained glass, &c.

AUGUSTA MARKET.

TUESDAY P. M., June 20.

Cotton—Since our last publication the transactions among our cotton dealers have been heavy for the season of the year, but for the last three or four days the demand has fallen off, and a slight decline in prices has been made. We quote 4½ @ 7 cents as extremes of the market.—Little sold at either extreme.

Money—Exchange on the Northern cities, Charleston and Savannah sell from par to a small premium. Large sales of Central Bank notes have been made at from 12½ to 15 ℔ cent discount. State 6 ℔ cent Bonds are in good demand and would command 60 cents readily, and we doubt not a large amount might be sold at a few cents higher as there is much anxiety to purchase them.

CONTENTS OF THIS NUMBER.

	PAGE.
Practical Hints; Domestic Silk	97
Cattle Shed; Cattle and Sheep of Great Britain; Ashes	98
New Reaping Machine; Agricultural Societies	100
Ammonia; Rearing Calves; to Prevent the Flavor of Turneps on Butter	101
M. Boncherie's Method of Preserving Wood; Cure for Mange in Swine; Cure for the Scratches in Horses; Rye turning to Cheat	102
Our Volume; to Correspondents; Domestic Silk; Culture of Gama Grass	103
Head and Hand Labor; to make Cloth Water Proof; Things to be Remembered; Scab in Sheep; Augusta Market	104

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COMMUNICATIONS.

MARL.

The definition of Marl is calcareous earth, and Ruffin applies the latter term to the carbonate of lime, exclusive of all other salts of lime, and of lime itself. Pure lime is never found in nature uncombined, and many of its compounds are not known to exert any influence on soils; while others, though esteemed good manures, exist in such small quantities, and so rarely occur, as to be unworthy of consideration in comparison with the carbonate of lime, which has been discovered in immense strata, hundreds of feet in depth, and miles in length, and from whose application to soils such wonderful results have been derived.

It is time that our planters were turning their serious attention to the nature of this manure. It has occupied the labor and capital of many of the most intelligent agriculturists in Virginia, since its properties have been developed by that benefactor to the planting States, Mr. EDMUND RUFFIN; and our sister State, Carolina, is under considerable excitement with the recent discovery, and favorable analysis, of large beds of marl in her eastern districts: and having Mr. Ruffin among them, to point out the mode of application, and the thousand advantages to accrue from its use, no doubt its effects will be tested wherever it is found. Although our lands are not exhausted by cultivation, and far the larger part of the State is an uncleared forest, yet our older plantations are much worn; and to save the improvements on them, to check emigration to fresher soils, and to preserve to our posterity the timber, (and avoid the extra labor,) which the opening yearly of new fields would, ere long, destroy, no effort should be spared to restore them to their original fertility. Putrescent manure, with the aid of rest, and judicious rotation of crops, is the only resort at present known, for those who are beyond the reach of calcareous earth. But to the planters in the lower section of the State, or southeast of a line through the eastern boundary of Richmond and Stewart counties, this earth may be found in abundance and probably in many places can be procured with facility, and be applied with little cost of time and labor. In Burke, particularly, nature has strewed this manure with a bountiful hand. The pile of marl at Shell Bluff would supply every plantation in the county. However, it cannot be transported by land carriage to any great distance without manifest disadvantage, and at an expense which few would be willing to incur, even if convinced of the handsome profit which such investment would ultimately yield them. But this is not necessary. This bed extends through the county, and continues through the State, as shown by the digging of wells, and has only to be searched for with a boring machine, and worked by means of a shaft. Yet a species of marl protrudes from the surface in various parts of this county, and from an analysis of a few specimens, contains about 20 per cent of the fertilizing principle; and if taken from beneath the surface, would no doubt yield a much larger proportion. It is the argillaceous marl, which if specimens of the same strength, is regarded the best, since the shells which composed it originally are entirely disintegrated, and its action upon the soil will therefore be immediate. But the object of this communication is to call attention to the subject, by stating the different effect of marl; and to furnish those who feel sufficient interest to look for and examine it, with a simple process, by which to ascertain its strength.

Marl possesses the property of modifying the texture of soils. It renders a clay soil open, loose, friable, easily worked, and penetrable below the surface by heat, air, moisture, and the enriching principles of decaying vegetable matter; and it forms with a sandy soil, a cement which closes somewhat its pores, makes it more firm, and capable of absorbing and holding water. This is proved by the fact, that clay and lime cannot be made to adhere together in the form of mortar, whereas sand and lime will form a cement. It is beneficial, therefore, to the extreme soils, and is more so to those in which sand and clay are in better proportion.

While it furnishes of itself no nutriment to vegetation, it combines with the nutritive ingredients of manure, fixes them in the soil, and only yields them to the attractive power of growing plants. Neither sun, nor rain, nor air can waste them. In a soil where clay predominates, the manure (putrescent) is absorbed and retained for a season; a portion of its elements being given to plants, while the larger part is dissipated in the air by evaporation; and when sand prevails, there is no affinity for manures, and being porous, the salts are washed through it beyond the reach of the roots of plants, and retaining no moisture, and being easily parched, the heat soon expels the gases. But the calcareous earth combines chemically with these substances, and having great affinity for moisture, and ability to absorb a large proportion of it, it is not injured by hard rains, nor materially affected by long droughts. And a happy consequence of this is, that calcareous soils never wash.

An acid soil, (known by the growth of sorrel, young pines and broom straw, and nearly all our worn soils are more or less acid,) which prevents the early decay of vegetable matter, and therefore receives no benefit from the application of manures, unless in a fermenting state, when half their principles will escape before they can be absorbed by plants, is neutralized and rendered capable of receiving and holding the products of putrefaction. And by destroying their sustenance these noxious plants are likewise destroyed.

After the intermixture of marl with the soil, by the accumulation of vegetable matter it is rendered darker in color, thus more freely absorbing the rays of the sun, and becoming warmer. The effect of this, added to the stimulating action of the marl upon plants, is to hasten them to maturity. And our cotton crop, which is now shortened by an early fall, and is developed so slowly as to require picking until very late in the season, will be ripened early, enabling a larger quantity of prime cotton to be gathered, and rapidly, so that the crop may always be housed before December.

Marl is serviceable in forming new soils on "galls" and in gullies, when mixed with putrescent matter. It will not wash, and makes the manure permanent. It serves also to deepen a soil. The marl and manure are carried down together by rain, as far as the soil will permit, which is lower than is usually ploughed. And by repeated applications of both marl and vegetable matter, the land will become fertile beyond conception.

From its power to retard somewhat the putrefaction of matter, and combine with the products of it as fast as they are evolved, it has a tendency to destroy, by seizing and retaining the miasmatic gases, (since these are generally supposed to arise from the action of heat and atmosphere on decaying matter,) and may therefore be regarded as a preservative of health wherever it is applied.

As to the permanency of its effects upon soils, Mr. Ruffin alludes to a farm in England, whose productive power, (asserted by Lord Karnes,) have increased for 120 years after the application of marl; and to another, in Virginia, which had been marled before the revolution, and whose fertility had increased, to his own knowledge, during the last 15 years. Besides, writers on agricultural chemistry place calcareous earth as an element of a good soil. It is one of the three ingredients which, united in certain

proportion, is prepared to receive manure, and support all vegetation. It is regarded as essential to a rich and proper soil, as either clay or sand, and is just as indestructible. By occasional rest, and occasional application of putrescent matter, a soil rendered calcareous artificially, will be more than double in productive capacity in 10 years, and quadrupled in 20 years; and if the theory is correct, which I do not doubt, but which practice has not fully established, because sufficient time has not elapsed to test it effectually, there will scarcely be a limit to its increasing fertility. But I cannot intrude upon your space to enlarge upon the subject. At a future time I may briefly state the mode of applying marl, and the character of those soils upon which its effects will be earliest and strongest.

To Analyse Marl.—Take a specimen, dry it perfectly in a shovel over the fire, pulverize it thoroughly in a mortar, and weigh accurately 50 grains of it. Take next a retort with as open a mouth as practicable, put into it about 200 grains of muriatic acid, diluted if you please with once or twice its bulk of water, place retort and contents in the scales, balance them and note the weight. Next, pore carefully the 50 grains of marl into the retort; give time for the carbonic acid gas, which rises with effervescence in a white vapor, to escape. When the effervescence ceases, and the vapor has entirely passed off, which you can aid by blowing, balance the scales again ond note the difference of weight. Say, for example, that this difference is 20 grains, then, knowing that every 100 grains of carbonate of lime contains 44 grains of carbonic acid gas and 56 grains of lime, and having taken 50 grains of marl, we have the following proportion:

If 22 grains of carb. acid gas are found in 50 grains of carb. of lime, how many are 20 grains carb. acid gas (which we supposed escaped from the retort,) found? Answer, 45 grains of carb. of lime: or,

22:50::20:45—which last term is the quantity of carbonate of lime in a 100 grains of the marl analysed. A BURKE FARMER.

JEFFERSON HALL, GREEN CO., June 15, 1843.

Messrs. JONES—The enclosed recipe, which is doubtless a good one, and which is simple and easily procured, I wish published in the Southern Cultivator.

Yours, respectfully, A. G.

"CURE FOR THE BOTS.—The editor of the Baton Rouge Gazette states, that he is informed by gentlemen who know, that strong tea, made of common garden sage is one of the most effectual remedies for bots in horses ever discovered. Also, a branch of sage chopped into the feed of horses once a week, will prevent the bots altogether.

When your horse is taken ill of the bots, give about a quart of strong sage tea, and he will recover in a few minutes.

The above remedy is simple enough in all conscience, and has this to recommend it—if it should do no good, it can do no harm—and being innocent in itself, is, we should think, worthy of trial."

CURE FOR BOTS IN HORSES.

Make a strong decoction of tansey tea, bruise and press out the juice, and drench with a quart at a time. It is said by a very knowing old lady of Morgan county, to be the very best of remedies. It is also stated, on good authority, that the grub, dropped in a strong tea of the above plant, will immediately die.

Green County, June 19.

WILKES COUNTY GA., June 24, 1843.

Messrs. EDITORS.—I will comply with your request for all your subscribers to communicate their experience to you, or at least a part of it. As I am not accustomed to writing I hope you will correct all mistakes.

The subject to which I would call the attention of farmers, is one of great importance to them—it is.

THE CULTIVATION OF THE GRASSES.

There is very little attention paid to this subject in this county, and very little in the State. I do not know of a single farmer in this county who sows any kind of grass seed—they say there is plenty to cut up now without planting more. Now I do not know of one good reason for not planting grass seed. We can have as good clover here as at the north, and there are a great number of grasses which are natives. I have had grass growing in a square in my garden, three feet high, and which made as good hay as I ever saw. It is the kind called here "crow's foot."

It seems as if our farmers would rather have their cattle poor and starving, than to be at the trouble of sowing grass to make hay for them, when there is nothing for them to eat in the fields. Now this is all wrong. If they would build good shelters for their cattle, and provide enough for them to eat, they would find it more to their profit. Cattle when sheltered do not eat as much as when kept in the cold blast of winter; where they get on the sunny side of a fence and shiver as if almost frozen. Another thing, cows give more milk when kept under a warm shelter, and do not eat as much by one third.—I asked a farmer last winter, how his cattle stood it. He replied, "they could all get up without help and that was all." There is another thing in which our farmers are at fault—it is, they keep too many cattle. If they would keep fewer and keep them well, they would be gainers by it.

It is a matter of rejoicing that the people are waking up to the importance of improving their land and keeping better stock. I will not encroach on your valuable paper farther. If you think the above worthy of a place, give it. You may hear from me again.

I remain your friend, A. O.

FRUIT STAINS.—The fumes of brimstone will remove fruit stains and iron mould fram linen and cotton. Moisten the part stained with cold water, then hold it over the smoke of burning brimstone till the stain disappears.

WOUNDS AND BRUISES ON HORSES.—Take one quarter of a pound of saltpetre, half a pint of vinegar, half a pint of spirits of turpentine, put them together in a bottle, and shake up before using. Apply it to the wound with a feather, three times a day.

TRANSACTIONS OF THE NEW YORK AGRICULTURAL SOCIETY.

We are indebted, says the editor of the Southern Planter, to the politeness of Mr. Luther Tucker, the Secretary, for the second volume of the Transactions of the New York State Agricultural Society. As in the last volume, so in this, we meet with matter of great ability and of general and absorbing interest. Amongst other things, we find two prize essays, from the pen of Willis Gaylord, Esq., occupying sixty pages, every word of which we should be glad to transfer to our columns, if the nature of our work permitted. As it is, we must be content with making brief extracts from such portions of these essays as we deem most interesting to our readers. The first essay is on

THE PREPARATION AND USE OF MANURES.

After examining the nature and constitution of plants, Mr. Gaylord remarks, "In the preparation of manures, the principal object to be aimed at must be to supply materials for the formation of carbon and ammonia; and these are found in the greatest abundance in dead or decomposed animal and vegetable matter." He then proceeds to consider separately the different kinds of manures, under appropriate heads, and first of

ANIMAL MANURES.

He quotes a late British writer on agriculture, who says, "If cattle repay their food and the expense and risk attending their keeping, the manure is sufficient profit. Even with a moderate loss, they must be kept when manure cannot be purchased. Manure is to a farm what daily food is to an animal; it must be procured at any sacrifice." Mr. Gaylord thinks, that to such crops as corn, potatoes, &c. that do not require forcing in the early part of their growth, but demand nutriment at a late period of their vegetation, to perfect their seeds or roots, long manure may well be applied in the spring; being well covered, fermentation will not take place until the gases, which are eliminated in that process, will be retained by the earthy covering, and appropriated by the roots of the plants. To preserve manure for such purposes, he thinks, that the usual plan of incorporating the drippings of the cattle with the usual litter of the farm yard, during the winter months when the absence of heat prevents decomposition, is fully sufficient; but for other crops, as turneps, beets and carrots, where the influence of manure is required to be felt at once, in order to push them forward at the first start beyond the reach of insects, he thinks the vegetable matter should be reduced to a state of perfect decomposition, before its application. Whenever this process takes place, the vegetable matter should be protected and covered, as in the compost heap, with alternate layers of sod, earth from ditches, ponds, &c. which may absorb the drainings of the manure above, and arrest the ascent of the gases from the manure below. He says, "the more solid such deposits of manure are made, the more slow will the fermentation be. Should the dung in the heaps be too slow in fermentation, it may be hastened by opening the piles, or still better, by making holes in the top into which the wash of the yards and the urine of the stable may be poured."

If Mr. Gaylord is correct in supposing that no loss occurs during the winter months in the farm-yard manure, his plan of hauling it out and covering it up at that season when the heat generates decomposition, is highly to be recommended; because it saves all the labor of the compost heap during the winter season. But, in our southern climate, at least, we imagine that the loss, even during the winter, from evaporation and solution, would more than justify the labor of daily collection and addition to the compost heap. In addition to the earth and sods, which are mere mechanical retainers, we

do not doubt that valuable chemical agents, as gypsum, salt, &c. may be added, whereby desirable combinations with the gases, &c. liberated in the process of decomposition, may be obtained. Upon this portion of the subject the science of chemistry is one day destined to shed most valuable light.

Upon the subject of

GREEN CROPS,

Mr. Gaylord remarks, "For a plant to enrich exhausted soils, affording as it does both top and roots to a large extent, there is no plant equal to *clover;* and particularly where it is necessary or desirable to have the green crop fed off by animals. I prefer letting the clover grow until nearly or quite in blossom, and then turning sheep upon it. They will eat much of it and fatten rapidly; but they will trample down more, and this, mixed with their dung, forms in its decay a most efficient top dressing; and repeated for two or three years, forms an admirable preparation of the soil for wheat or other grains. When a crop is cultivated to be ploughed in, it should be done at the time when the plants contain the greatest quantity of nutritive matter, and have least exhausted the soil in which they are growing. This, in most cases, will be when the plants have come fully into flower. At an earlier period there may be as much weight, but a larger portion of it will be mere water; and, if allowed to stand much later, the soluble matter is lost in the seed, and the ligneous part of the stem becomes more difficult of decomposition Buckwheat is a good plant for a green manure; its growth is rapid, and gives a great weight per acre, and two crops may be ploughed under in a year. The best way of ploughing in such green crops, is to pass a heavy roller over them, which lays the plants close to the ground, and greatly facilitates covering them with the plough. It is believed that corn, sown broadcast, and when just showing its tassels, cut and covered by the plough, would be one of the best crops that could be chosen for this purpose. A man or boy, in this case, would be required to follow the plough, to place the corn in the furrow for covering, at the next passage of the plough. Taken at this time, corn abounds in nutritive matter, and could scarcely fail af proving a first rate fertilizer of the soil.

Mr. Gaylord thinks that wherever other vegetable matter can be had, fallen LEAVES will not pay the expense of gathering.

PEAT, SWAMP AND POND MUD,

he esteems very highly, but these substances applied in their natural state are almost inoperative, as compared with stable manure. To enable it to give out the ammonia, with which it abounds, peat or swamp muck must be fermented, and it is for want of this process that it is so little esteemed, in general. To bring it to this state, we are recommended to compost it with half its bulk of stable dung, which it is asserted will form a heap equal in fertilizing properties to three times the quantity of dung employed.

Poudrette, urate, guano and other peculiar manures are brought under our notice in order, but passing over these we come to the more general one of

LIME.

Upon this subject our author remarks, "It appears as the result of experience, that lime produces the best effect on what are called stiff loams, or loams inclining to clay, and in which a good proportion of decayed organic matter is found.

"It is found, too that it operates more favorably on soils natural to oak and its kindred trees, such as walnut, poplar, &c. than on those where the beech, elm and maple constitute the principle timber. It is singular that the richest limestone lands, as they are called from being based on this rock, are frequently those on which heavy dressings of lime operate like a charm.

"If used as a top dressing, lime is usually applied to the sod in the fall; but the practice most approved, is to lime the corn ground in the spring, on the inverted sod. Manure is applied to the wheat crop after lime. The quantity of lime used varies much. There is no doubt it has sometimes been used in excessive quantities; and when used on soils nearly destitute of vegetable matter, can produce no good effect.—On a medium soil, fifty bushels per acre may be considered an abundant dressing; but three or four times that quantity is sometimes used. The best method of using lime, is to take it from the kiln, unslacked, and deposite it in heaps in the field where it is to be used, not more than three or four bushels in a place; and either slack it by pouring water over it, or, which is better, by covering each pile with earth, and letting them slack by the moisture thus furnished. When sufficiently fine, the earth and the lime are mixed by shovelling over, and the mass is then scattered over the land to be dressed. The soil should be well harrowed after the application, to incorporate it more completely with the surface earth."

SALT

is very highly recommended. "It appears that salt in small proportions, promotes the decomposition of animal and vegetable substances; that it destroys vermin and kills weeds; that it is a direct constituent of some plants, and therefore necessary to their perfection; that all cultivated plants of marine origin contain it, asparagus, for instance; and that all such succeed better when watered with salt water, than when deprived of it; that salt preserves vegetables from injury by sudden transitions in temperature, salted soils not freezing as rapidly as those to which salt has not been applied; and that it renders the earth more capable of absorbing the moisture of the atmosphere. When salt is applied as a manure, it may be used in quantities from six to fifteen bushels per acre; although some have gone as high as fifty bushels. Farmers, however, should be cautious how they venture on excessive doses, as an extravagant one could scarcely fail of being fatal to any crop.

"Salt and lime, artificially mixed as a manure, promises to be a valuable aid to the farmer in those positions where the soil abounds with insoluble silicates or geine, and where other manures necessary to produce decomposition or fermentation are not at hand. Professor Johnston recommends a mixture of two parts of lime and one part of salt, the mixture to remain incorporated in a shady place, or covered with sods two or three months before using. Salt and lime should not be used immediately after mixing, as bad results are apt to ensue; but after being well mixed in a dry state and lying as directed, it may be applied at the rate of from thirty to sixty bushels per acre, either before or at the time of sowing.

"Dr Dana directs to take one bushel of salt and two bushels of lime; to make the salt into strong brine, and with it slack the lime. Mix both well together, and let them remain ten days; then let them be well mixed with three cords of peat, shoveled well over for about six weeks, when it may be used. A quantity of salt sufficient to destroy all vegetation, may be applied to a soil with safety when a few months are to elapse before the crop is to be put on; as the chemical changes which take place, partially neutralize its effect during this time. A small quantity mixed with the soil in each hill of corn, has been found to protect it from the wire worm and the cut worm, indeed there is no substance that insects of all kinds more dread than salt. It is probable, therefore, that further experiments will show that not the least value of salt is to be found in its preventive properties against these depredators. Mixed with soot, salt acts with great power on roots."

We know how objectionable long articles are in general, and have endeavored to compress the *gist* of this valuable essay into a few pages. The subject is in its nature extensive, and we fear we have done injustice to Mr. Gaylord in our abridgement. Indeed, properly considered the essay, long as it is, is nothing but a series of condensed remarks upon a variety of subjects, all coming under the general head of "manures."

AMERICAN MANUFACTURED SILKS.

The Baltimore Patriot of the 22d ult. says:—Mr. John W. Gill, proprietor of a Silk Manufactory at Mount Pleasant, Jefferson county, Ohio, has been exhibiting at Barnum's City Hotel, for some days past, a variety of very handsome and substantial specimens of American Silks, manufactured entirely by himself. They consist of gloves, cravats, handkerchiefs, stockings, scarfs, pieces in the web, for ladies' dresses, of different colors, besides numerous other articles, all of which have an admirable texture, and appear to be of a highly durable quality.—Mr. G. states that his enterprise has thus far proved successful, even beyond his most sanguine expectations. Besides the factory, which employs about fifty hands on an average, he has a large Mulberry grove and an extensive cocoonery, whereby he is enabled to raise a considerable portion of the worms that supply the raw material. It is several years since this enterprise was undertaken by Mr. Gill, and at present he has invested in it about $30,000, which yields, as he states, a very handsome equivalent. Having given much attention to the business in its various branches, he has also had an opportunity of discovering the best manner of cultivating the worm. to accomplish which a ventillating apparatus has been invented by him, to facilitate the worm in feeding, found to be of great service. It is simple in construction, saves much labor, and is accounted a highly valuable improvement.

The success thus secured by the unremitting perseverance of this gentleman, in a comparatively new section of our country, goes far to show that the manufacture of silks in America, is destined, at some future period, to assume an importance commensurate with the laudable ambition of those who gave to it the first impulse. Facts are the strongest arguments, and we think those noticed here, are conclusive proofs that much can and will yet be accomplished in this country in reference to the manufacture of silks, and the cultivation of the silk worm.

PRESERVING EGGS.—It would be quite a valuable discovery to farmers in the neighborhood of a large market, as well as to household economy, if a cheap and easy method of preserving eggs could be practised, whereby the price would be more equalized through the various seasons of the year. Reaumer, the inventor of the thermometer which bears his name, tried many experiments for this purpose, and found that the cheapest and most effectual method was to apply oil or grease, with which they were rubbed, or into which they were dipped. He found that they were preserved quite as well by the thinnest layer of fat, as by the thickest coating, so that every part of the shell, (which is porous and admits air,) was covered. All sort of fat, grease or oil, he found well adapted to preserve eggs, and kept them in this way, he says, for nine months, as fresh and good as the day they were laid. Will some of our readers try a few dozen in this way, and let us know the result.—*Newburyport Herald.*

PRESERVING SCYTHES, &C. FROM RUST.—To preserve scythes, sickles, reaping hooks, and other steel tools from rust after the season for using them, wipe them clean and dry, and hold them before the fire and keep drawing them backwards and forwards until warm enough to melt wax; then take some beeswax and rub it all over. A half-penny worth of wax will be sufficient for a sythe. Then put it in a dry place, but not warm; it needs no other covering. The usual method is to wrap a hay-band round; but in winter time this naturally contracts moisture, or the damp air strikes in betwixt the folds of the hay-band.—*Farmers' Magazine.*

JUDGE O'NEALL'S ADDRESS,

Delivered before the South Carolina State Agricultural Society, December 29, 1842.

FELLOW MEMBERS:—Circumstances beyond my control have prevented me from bestowing that preparation upon the address, with which you charged me, which I desired to give it, and which it merited to receive. Rather, however, than wholly fail in the discharge of a duty assigned me, the work of a few hours, naked and unadorned, is presented to you.

In approaching the consideration of agriculture, the mind naturally turns back and asks, what is its origin? It is coeval with man himself! His first position of primeval innocence and happiness was to dress and keep the garden of Eden. In this is manifested the divine appointment, that in tilling the earth is to be found man's best and happiest employment.

When man was tempted, fell and was banished from the garden, the curse of God was not one of unmitigated severity. There was not only the hope of happiness beyond the grave, to console the erring father of men, but also an assurance of an abundance to sustain this present life, to be obtained by labor well and properly applied. "*In the sweat of thy face shalt thou eat bread,*" was the announcement of his future destiny, and that of his mate; and when it has been well and faithfully obeyed, by industrious occupation, it has not only blessed individuals, *but nations.* Indeed, in all ages of the world, national prosperity has depended upon the state of agriculture. Where it has flourished, every thing else has also flourished. The palmiest days of the eastern world, were those when her soil was cultivated like a garden; when Egypt could point to her whole surface, as a field of waving corn, irrigated by the waters of the Nile; when Syria could look upon her plains, teeming with luxuriance, as her terraced mountains, crowned with the labors of man; and when Italy could sit down in the midst of her vineyards, and her fields, and from her cornucopia pour their rich reward into the lap of the laboring husbandman.

It is not, however, its only general benefit that it contributes to national prosperity. I have no hesitation in saying that it is the only rock on which a nation can build, in the hope of more than an ephemeral existence. Here reasoning is unimportant, *let facts speak.*

Where are the great merchant cities of Tyre and Sidon? They are rocks on which fishermen dry their nets! Where is Babylon? She has perished! Where is Palmyra? Covered, with all her glories, in the sands of the desert! Where is Thebes, with her hundred gates? She "was and is not," is the answer of history.—Egypt, the victim of tyranny and misrule under her Coptic, Grecian, Roman and Mohommedan rulers, still knows her "years of plenty;" and by her agricultural riches, has enabled her tyrant to breast the proud domination of his own master.

Syria, trodden under foot by men who are more merciless than the beasts of the forest, can still point to spots of her soil, which know the husbandman's care and culture, and which bring forth abundantly; and to her mountain fastnesses for that free spirit which was born, nurtured and bred in the pure air of the cultivated fields, and which, in its manhood's prime, is yet to burst, as if they were of tow, the chains of Turkish slavery, and to clothe her again with that luxuriance which denoted her as a "land flowing with milk and honey."

China, with her millions upon millions, on land and water, the oldest nation of the world, has been alone sustained by her agriculture; for her commerce is only the privilege of a few, and has neither fed nor clothed the great body of her people. When, at this moment, England is thundering at her gates for the purpose of compelling her to pursue *an unholy traffic,* her only safety is in the immense masses of her people, and their capability of providing food for themselves, and thus overcoming, by patient endurance, *a cruel and unjust war.*

Continental Europe, ravaged as she has been by the armies of England, France, Austria, Rrussia and Prussia, points to her laboring peasantry, and in the language of Goldsmith, exclaims,

"Princes and lords may flourish and may fade,
A breath can make them, and a breath has made;
But a bold peasantry, a nation's pride,
When once destroyed, can never be supplied."

Her agriculture has sustained her tottering thrones, and her people cut down and apparently annihilated, have sprung up again, like the armed men of Cadmus, at her bidding. But her merchant cities have not been equally successful. Venice, stript of her gorgeous robes, is no longer the bride of the Adriatic! She has not utterly perished, like Tadmor of the wilderness, or Bozrah; but her canals and her storehouses are no longer thronged and filled by the trade of the world.

England, on whose dominions the sun never sets, has attained her proud eminence more by her agricultural resources than in any other way. True, her commerce has whitened every sea, and every breeze has borne to her untold treasure, still the results of almost every foot of her surface, tilled by experienced and skilful agriculturists, have furnished the means which equipped and sent forth her gallant barques to every clime. This too, has been the case when her agriculture has been fettered by unwise legislation, and when that unholy principle which devotes the many to the few has been enforced.

In America, the forest, the soil, and the luxuriant productions which a little labor can secure, all unite in recommending agriculture to us as our first, greatest and best pursuit; yet how little heed has heretofore been paid to skilful husbandry? Of late, it is true, so much has been said, and so well said, to recommend it to the respectful consideration of every one, that little remains, which can be considered new or interesting. Still, notwithstanding this, agriculture, with us in South Carolina, is a neglected science, with few real followers, and with scarcely one capable of teaching its simplest elements. Other sciences are crowded and traced out and pursued to their most legitimate results. The earth, in the mean time, like an indulgent mother, is treated with constant neglect. She flings her treasures into the laps of improvident husbandry, which in return leaves her bosom to be furrowed deeper and deeper, by the rains and frosts and snows of winter. In a few years, she is clothed with the sere and yellow garments of sterility, and the occupant seeks some other genial spot on which he can plant, and from which he can gather abundance, until exhausted nature sinks into repose and barrenness. This is no fancy sketch, it is the result of practical husbandry, as carried out in the cotton planting States, and especially in South Carolina. Is this the necessary result? Science, knowledge, practical skill, enlightened as it should be, answer no! The cultivation of the earth, with rotations of crops, and intervals of rest, is just as practicable in the cotton growing States, as it is elsewhere. Let us restrain ourselves and recollect, that less land, *well planted, well manured, and well cultivated,* will make larger results, than larger quantities, *badly planted, unaided by manure, and imperfectly cultivated.* Cotton land, as level as can be selected, can be more easily preserved. If none other than rolling land can be procured, then horizontal plowing and ditching will do much to save it.—But that policy, which leaves the cotton beds and furrows to stand during the winter, will soon prove how disastrous it is, by precipitating the rich loam of the hill sides into the valleys below. How much wisdom would there be in ploughing against and around the whole surface of a cotton field, as soon as the crop was gathered. The soil would thus be saved, and the land would be in better heart for the succeeding crop. Some of the formerly rich hills of the Catawba and Broad River, are now seamed with gullies, and surmounted with irremediable barrenness. The traveller would ask how has this happened? The answer is before us, in the cultivation which our ancestors followed, and which we are still pursuing.

In the level lands of the middle and lower country, there is no excuse for the sterility which abounds. Nature has here lavishly provided for the wants of man, in the teeming luxuriance which greets his efforts, but he forgets that the earth, like man, may become worn out, by being over-tasked. The remedy is at hand, *manure;* and in most sections, marl abounds; it is only necessary to seek and apply it, and the earth exchanges old age and sterility for youth and abundance. In the upper districts, this last advantage, so far as we have been able to examine, does not exist; still, in many parts of the country, inexhaustible beds of limestone are found. In Laurens district, on Rabun's Creek, nine miles southwest of Laurens C. H. on the plantation of John S. James, Esq., is a most extensive quarry of fine limestone, of very much the same character with that at the Limestone Springs, in Spartanburg district. It is in a fine section for agriculture. The lands are rich loam or red clay. The lime in their very midst will make them richer and more productive than they ever were. For wheat, the land of that neighborhood is as well, if not better, adapted than any with which I am acquainted, and if the lime, which is so accessible to their owners, was well applied, it would make them produce some thirty, some sixty, and some an hundred fold. The same vein running from northeast to southwest, is found at the Limestone Springs, and through the whole region from Broad River to King's Mountain. What fertility might be given to the thin and comparatively barren soils of this whole region by the judicious application of the mineral treasure in her bosom! In the hands of New England enterprize, it would be as a garden. Why not so in ours? Simply because necessity has not, as yet, taught us the value of assisting nature in her attempts to bless us.

That there is a better prospect ahead, is evidenced by the great interest beginning to be felt by *farmers* in Agricultural Societies. They are no longer left to be managed by lawyers, doctors, clergymen and educated men *alone.*—The tillers of the earth, *that noble yeomanry,* who earn their daily bread by the sweat of their brows, are members, and are bringing to theory and *book farming* all the aids of practical husbandry. The two united are what we want.—In the exchange of ideas thus with one another and the correction of faults by experience, we may hope that every year is doing something to benefit the State.

One great object to be attained is, to arrest and prevent that disastrous spirit of migration which, in twelve years, has carried from us one third of our wealth and population. Like the discoverers of America, "gold, more gold," has been the unceasing demand of our people.—When South Carolina yielded nearly $300 for every laboror, still it was not enough; and like the Indian, pointing his Spanish conquerers to the interior for the richer mines, so cupidity pointed our people to the richer fields and prairies of the southwest, as more and more productive. There they expected to find the *el dorado,* but the chase has been in vain; and the conviction is beginning to roll back upon us, that we need no better country than our own cherished home, our own, our native State, South Carolina, if we will bring to her service all the aids of enterprize, industry and intelligence which we possess. Contemplate the scene around us, and we may well ask, is there, in these times of disaster, trial and difficulty, any portion of the world better off than South Carolina? None! Here distress is partial; and in the other States of the Union, (except North Carolina,) it is universal and overwhelming.—How is it so? South Carolina has neglected her agricultural resources; crippled herself in many vain and visionary undertakings; still she had but "to arise and shake herself as she was wont," and all was well. Whence this comparative prosperity? The answer is, *our faith*

has been kept; our credit has been preserved; our cotton bags and our barrels of rice have annually met the demands upon us! This comparatively happy and blessed condition demands unceasing gratitude to the Great Giver of every good, who has blessed us with plenty, and put it into the hearts of our rulers to rule with honesty and govern with wisdom! This has been especially and signally the case with your moneyed institutions, *your banks.* While in all other quarters explosion has followed explosion, fraud has succeeded fraud, *here* bills have maintained a specie value, and no one has supposed that mismanagement or fraud mingled in the management of a single bank in South Carolina. That much of our prosperity is to be ascribed to this fact, cannot be denied; and if South Carolinians ought to be prouder of one thing than another, it is that her sons have passed the ordeal of bank temptations, unsuspected, uncorrupted.

This contemplation, this reflection, this comparison of ourselves with our neighbors, is surely enough to prevent the further spread of the spirit of emigration. Let each citizen of the State come to this conclusion, "South Carolina is my home, I will do her and myself all the good I can," and he will find, in the language of an early settler of the State, "South Carolina is the garden spot of the world." This may be said to be an extravagant view of the matter.—Test it in any way you please, and it will be found to have no romance in it.

There is an old proverb, that "a rolling stone gathers no moss." Just so it is with the emigrant. He is rolling on to his fancied treasury of abundance, but all is nakedness around him, and in his track. He may at last rest, and gather together, in a country to which he is a stranger, great abundance. He still looks back to the land out of which he came, and remembers it with regret. He who is content to remain in permanent and useful fixtures, establishes his comfort, and in constant attention to his land, in crops, and by the judicious application of manures, overcomes even barrenness, and in the increased product, he finds *at home* that abundance which the richer fields of the southwest promised him. That this could be proved by many instances, I may refer to each member's knowledge of the events which have transpired around him within the lost twelve years.

Are not, fellow members, these considerations, to which your attention has been turned, enough to make you redouble the interest which, as agriculturists, you feel in the State in which you live? Improvement is our motive and object. Therefore it is we meet *here* annually, that by a free intercourse from the mountains to the seaboard we may gather the lessons of experience, and bind them upon our hearts, and go forth to test them in the labors of the coming year. In this way, much good is done, and we may begin soon to flatter ourselves that we will have something like an agriculture of our own.

This, however, demands what we have not, in all parts of the State, *an educated class of husbandmen.* When I say educated, I do not mean *"book-learned farmers;"* I mean *men thoroughly trained to their business.* The great fault of education in South Carolina is, *that it has no particular application.* The clergyman, the lawyer, the physician, the merchant, the mechanic, and the farmer, are all educated alike. The mere statement of the fact shows the defect.—How is it to be remedied? We have not schools arranged for every department of life, and perhaps such are not always desirable. But with suitable attention on the part of parents and guardians, education might be so directed as to fit a man for his business, instead of making him a prodigy of learning, *without one particle of common sense.* The future farmer and planter needs but the careful and judicious training of home, to be prepared for his station. In early life, in the intervals of his scholastic education, if his mind was turned to the acquisition of useful knowledge in the management of the farm, and his hands were trained to the use of tools, he would insensibly become fit to be the head of a well ordered plantation. The vices and diseases resulting from idleness, would be thus prevented, and the young men of South Carolina, instead of growing up in the shade, and liable to be withered by the blighting influence of a burning summer's sun, would grow up with nerves strung by moderate toil, and be men capable of facing and performing their duty.—This preparation will not unfit the young mind for the acquisition of knowledge; indeed, it will increase its capabilities. Exercise, with an object to be attained, blesses with the *"mens sana in sano corpore."* To such an one, education will not open out her blooms in vain: he will pass from flower to flower, and from each extract that which is good or pleasant, and return to his post in society, laden with the rich and varied treasures of *useful learning.*

We need, too, the lessons of patience.—Promptness is a part of our Southern character; we must add to it endurance, before we can succeed as agriculturists. Whatever is attempted should be thoroughly tried before it is abandoned. Many of the schemes to which our attention has been of late turned, are no doubt mere humbugs. Still this is to be said—every thing may be called a humbug until its utility is tested. It is the part of wisdom to try every thing which bids fair to profit us; and one trial perhaps is never enough---it is at least entitled to an Irishman's privilege, of being twice heard. This is particularly the case when we are looking around, on the right hand and on the left, for the substitute for our great failing staple, cotton. Many things must be tried; but it will be in vain to expect any to take its place at once.

Indeed, it seems to me, that there is one remedy, and only one, for the state of things resulting from the low prices of cotton; it consists of economy at home and abroad. If we could bring ourselves down to the standard which the present price of cotton presents, all would soon be well. Buy neither pork, mules nor horses. Let these be the product of the farm, and one branch of our present difficulties will be cut off. Carry this spirit of retrenchment into the household, and let home furnish all the usual supplies of clothing for the laborers, and hard times will begin to be good times. Real independence, that which is above want, will occupy every farm. I often go back to the period from 1808 to 1815, when legislators were not ashamed to meet in homespun, when ladies vied with each other, not in the luxury of foreign dresses, but in those made at home, and ask when was South Carolina more happy? Never, within my knowledge. Does this time demand similar sacrifices? Your own sense of the necessity around you must answer the question.

Of one thing there is no doubt, the capabilities of the State are hardly known. Her agriculture is in its infancy. She is just pluming herself for a loftier flight than any she has ever before attempted. Our fields are to be cultivated with more skill; better and more numerous stocks are to be reared; South Carolina is to become less a planting and more a farming State. That this will add to her greatness and her happiness cannot be denied. In this effort she has, it is true, one peculiar difficulty to encounter, in the carelessness of her operatives. Still, our slaves are capable of more, much more, than we have hitherto had credit for. It is only necessary that they should be taught habits of regularity, economy and thrift, to make them the most effective laborers in the world. This is what we are attempting. Let the owner be resident, as far as practicable, on his plantation; and let him understand well that which he is about carrying out. Let his slaves be taught that his interests are their interests. Begin with small things, and teach them the necessity of attention. For instance, teach them the absolute necessity of shutting a gate, or putting up a rail when out of its place; of carefully feeding and watering the stock under their care; and there will not be much complaint about *negro carelessness.* When this much is accomplished, the whole difficulty is overcome, and there is nothing to prevent a South Carolina farmer from competing with any one in any of the adjoining States. To my brother-farmers, intelligent and experienced as you are, I need not add, you cannot succeed with negroes, as operatives, as you desire to do, *unless you feed and clothe well.*—Make them contented, and then "Massa" will be, as he ought to be, the whole world to them.

In our climate, health is supposed to be uncertain, and that this fact will always stand very much in the way of agricultural improvement. The difficulty exists, and in the lower part of the State is, beyond all doubt, a great obstacle to improvement. Still, it is not insuperable, *even there.* For Nature, kind and provident as she always is, has provided pine lands in the neighborhood of the rich swamp lands, where the owners can reside in comparative safety. In the interior of late years, we have been scourged with disease, even to the foot of our majestic mountains. That it has visited us as a pestilence, and as a chastisement for our sins, is beyond all doubt, the true Christian view of the matter. Still it is our duty, as far as we have the knowledge or the means, to remove the secondary causes. In a country like ours, undergoing the process of having the forest annually cleared away, it is to be expected that many causes of disease will thus be produced. The hill-sides cleared, and the ravines filled up with the timber cut down from above, and afterwards with the alluvial from the cultivated hill sides, cannot do otherwise than produce disease. So, too, where streams or springs are choked or covered up, the neighborhood must expect the fall fever. These causes may easily be removed, by ditching, draining and cutting away the drifts. But the annual decomposition of the leaves in oak and hickory land, with the decaying timber allowed to lie and rot upon the ground, will produce disease, especially in wet summers. The remedy for this was suggested by the intelligent foreman of the Grand Jury of York District, at the last Fall Term, (Mr. John Springs,) *"burn the woods."* Let this be done early in the season, before the sap begins to run, and no injury will occur to the timber. But some suppose the soil will be injured; intelligent, observing men, on the contrary, believe that the ashes of the leaves are worth more to the land than their natural decomposition; and, so far as I have had experience, I am satisfied their views are correct. If, however, there was a doubt about it, health is of too much importance to be weighed against such a consideration. In York District, during the last season, from 300 to 400 of the inhabitants were gathered to their fathers. What an awful mortality! How important, if practicable, to counteract it, and prevent its recurrence! A country visited annually with fever never can improve in that ratio in which it would without it. It is our duty, therefore, to make every effort we can to restore the State to health.

Much will depend upon habits of regularity in every thing; and temperance in eating and drinking is essential to health. To farmers, men who are exposed to the vertical rays of our summer's sun, this advice cannot be too often repeated. Good, pure cold water, I regard as essential to the health of laborers. If the water which they drink is impure, it is in vain to expect health; with a little, very little attention, this first and best gift to man can in all places be secured.

At this time, much depends upon properly developing the resources of every district. If marl can be found above Orangeburgh, what incalculable benefits would flow from the discovery to every place where it might be, or to which it might be accessible. So, too, if the vein of limestone which is seen in York, Spartanburgh and Laurens, could be traced and made available throughout its whole course, great good might result therefrom. So, too, a careful analysis of our soils, and the suggestions of science, pointing out that which was

wanting to restore or increase their fertility, would be a great desideratum. In many sections minerals abound; their knowledge and proper classification would contribute much to the wealth of the State. Paints, asbestos, fossils, and clays of various kinds, and of great value, are known to exist in the State, and still no one can say, with certainty, any thing about them.

An agricultural survey of the State, in some way, ought to be obtained. Whether the State should make an appropriation for this subject, is a matter which belongs appropriately to her representatives, now assembled, and not to us. One thing is, however, certain, a small sum of money could not be better and more appropriately applied. It might be, that the intelligent gentleman who fills the chemical chair of the South Carolina College, could be induced to devote his vacations, for a few years, to this purpose. Nothing, I am sure, could place him higher in the good opinion of the people, or would confer a more lasting favor on South Carolina, than such a service.

In conclusion, fellow members, permit me to say, that the work in which we have embarked is no evanescent affair. It is for life! For agriculture is that upon which we all depend for subsistence. To it we often look as so common a thing as not to deserve much heed. But it is of far greater importance than any thing else in which we are engaged. Every thing else may be dispensed with; but this and life are so intimately blended, that together they live or together they perish. With one mind and one spirit, let us press the work in which we are engaged. In the language of empiricism, it may do us good, it can do us no harm. It may make us all better farmers, better citizens; but better patriots I hope none of us require to be. To our country, in one way or another, we are all devoted; and to our country's welfare let us all cheerfully contribute every thing we can to increase and bless her!

Columbia Planter.

BOMMER'S MANURE.

We know of no invention that has excited more curiosity than Mr. Bommer's new process of making manure. We have had hundreds of applications upon the subject, and we have returned but one answer to all the applicants, viz: "We have no personal knowledge upon the subject, but we have put the matter in the hands of a gentleman in this neighborhood, to be thoroughly tested by him, and his report, whether for good or for evil, will be published in the July number of the Planter." This report, which we are happy to find is of the most satisfactory character, is contained in the letter below from Mr. Woodfin. It is unnecessary for us to say any thing in this community of the standing and respectability of this gentleman; to those to whom he is unknown we will say, that we selected him as one of those individuals whose testimony would go as far as any body's. Mr. Woodfin is also known to most of the readers of agricultural papers for his skill and science in agricultural chemistry, to which, of late years, he has devoted much of his attention.

Southern Planter.

MR. CHARLES T. BOTTS:

Dear Sir—Having been requested by you to give a candid statement of my opinion of Bommer's patent method of making manure, for publication in your July number of the Planter, I will now with much pleasure proceed to say all I know about it.

On the 13th of May at night, I finished the preparation of a heap, according to this method, composed chiefly of dry wheat-straw, to which I added a small quantity of coarse unfermented stable litter, which was also, mostly wheat-straw, and proceeded to treat it according to the directions laid down in his pamphlet. On the 18th day after the heap was constructed, it was opened in the presence of a number of farmers, and other gentlemen feeling an interest in the matter. It was found not to be entirely decomposed, but in a high state of fermentation, which gave evidence that entire decomposition of the materials would very soon be the result: in order to facilitate it, however, I gave it another watering with the lees, which has effected the complete decomposition of the whole mass.—According to Mr. Bommer's method, entire decomposition should have been effected in fifteen days, and I have no doubt such would have been the result, if it had been conducted with more skill; up to the tenth day, I had succeeded in producing a very high degree of heat; on that day I gave it a very copious watering, thereby adulterating the lees too much, which caused the fermentation to subside in a measure. If the third watering had been properly made, with the lees in sufficient strength, I have no doubt the result would have been more satisfactory.—As it is, I have succeeded in thirty days, in accomplishing that which I could not, by any method known to me, have accomplished in six months. I have never used any of this manure, this being the only heap I have made, I cannot, therefore speak of its effect on vegetation; from its appearance, however, and my knowledge of the materials used in its manufacture, I should consider it of far greater value than the best stable manure, made in the usual way; I would not now exchange mine, load for load, for the best I ever saw.

This method, as Mr. Bommer justly observes, has the advantage over all others by enabling the farmer to have his manure when and where he wants it. I shall make another heap in a few days, mostly of green weeds, grass roots, &c. &c. when, if you desire, I will give you the result.

To make manure by this method is not costly, but somewhat troublesome; but what good thing can be obtained without trouble or expense?

I have thus, sir, given you a candid statement of all I know at present about Bommer's patent manure,

And remain, very truly,
Yours,

GEO. WOODFIN.

June 13, 1843.

From our conversations with Mr. Woodfin, says the editor of the Planter, we know that this report is, as it should be, as careful and guarded as possible. He felt the responsibility of the task imposed on him, and determined to say nothing, however sanguine his anticipations might be, that could, by possibility, induce the public to think more of this invention than it deserved. For our own part, from what we have seen and heard of this experiment, we feel authorized to say that, which we never felt at liberty to say before, that we are fully satisfied of the great value of the invention. We do not doubt that a certain degree of particularity is required in following the directions that does not belong to some men, and which would deprive them of the benefit of the method, at least to the greatest perfection; so there are some persons, as every physician will tell you, who cannot be induced to administer three successive doses of medicine according to the simplest prescription. But in the hands of any farmer who will strictly follow the method as it is explained in Mr. Bommer's pamphlet, this invention, we believe, is worth ten times the price at which it is to be obtained.

Mr. Woodfin speaks of the method as being "somewhat troublesome." We wish he had been more explicit on that point: large quantities of water are used in the process, and Mr. Woodfin's heap was so situated as to make the application of this material laborious; but nine times out of ten, it may be so located, that any quantity of water may be conducted to it with little or no labor at all: we do not know, but think it likely that it was to this portion of the process, that Mr. Woodfin chiefly alluded in the expression quoted.

As to the time required exceeding that specified by Mr. Bommer, it must be remembered that this was the first experiment in a process entirely new, where the operator, without any experience, was compelled to rely wholly upon the printed directions contained in the pamphlet. Mr. Woodfin does not doubt, that, by avoiding an error committed in the first process, the result could be effected in the time required.

If the chemical properties of this compost are what Mr. Woodfin supposes them to be, of which he is much more capable of forming an opinion than we are, if it is indeed superior to stable manure, it is hard to estimate the value of the invention.

ROOT CULTURE

The flattering reception which my communications on the culture of Rutabagas and White Belgian Carrots, have met with in the Southern Planter, emboldens me to try my hand again. I have not the vanity to suppose that I can enlighten the readers of your paper, but if I can even be the means of directing to this subject the attention of some of the planters, who are skeptical of the value of root crops, in comparison with Indian corn, and induce them to make a fair trial, I feel convinced they will throw aside their prejudice and adopt their culture hereafter, to a certain extent. I would not wish to be understood as recommending the cultivation of roots in preference to corn, but an acre or two in roots will add much in the economy of feeding stock; enabling the planter to keep more and keep it in much better condition too; and the more stock, the more manure, and the more manure, the greater the crops.

Prejudice and conceit are the offspring of ignorance, and the great barrier to agricultural improvement. The first requisite to improvement, in any business, is the conviction, that we *can* learn; the next, that we *will* learn. And it perhaps is invariably true, that the more we *do* learn in useful knowledge, the more we become sensible of our comparative ignorance, and the more we are anxious to learn. This results not only from a wish to serve ourselves, and multiply our enjoyments, but from a sense of sacred duty to society.

I am aware that it is generally supposed, at the South, that the same labor and the same expense, will obtain more nutriment from an acre of corn, than from an acre of any root crop whatever. But such is not the case here at the North. From our soil that will yield forty bushels of corn to the acre, we can get from four to five hundred bushels of rutabagas, and from three hundred and fifty to four hundred of carrots, or mangold wurtzel, which, for milch cows and young stock, we consider of great value. They have not the fattening qualities, but are considered to exceed all kinds of grain in growing flesh. One advantage the root culture has over corn is, that it does not exhaust the soil so much, as it draws a great proportion of its food from the atmosphere; besides, rutabagas can be sown after the other seeds, and harvested after all the other crops are secured, and no growth leaves the soil in better order for a succeeding crop.

The introduction of the root culture into Britain forms one of the most important eras in the improvement of British husbandry; and its introduction into our country will ultimately prove highly beneficial. And that they can be grown south, and in Virginia too, is evident from the following, which was published in an early volume of the "Albany Cultivator." Mr. W. S. Morton, of Prince Edward, in a letter to the editor says, "That our soils are well adapted to the culture of the rutabaga I have demonstrated, to my own satisfaction, by a successful trial, on a moderate scale, for a number of years. I have cultivated mangold wurtzel last year on about the fourth of an acre, and succeeded to the astonishment of all who saw the crop."

If the root culture can be made to succeed in Virginia, of which I have but little doubt, I should not at all be surprised to hear that the lands there should double in value in the course of a very few years. In fact, I am so well convinces of it, that were I to sell the farm I now

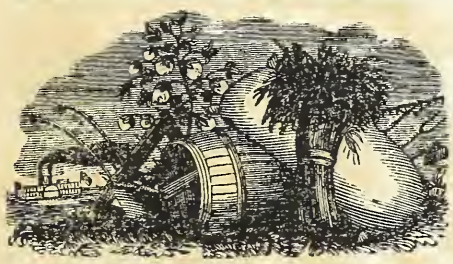
occupy, I should turn my face to Virginia, and take a *look* at some of the now considered worn out lands before I settled down again.

And now, my good natured readers, permit me to recommend, in the culture of either variety of roots, the *ridge system*, which I have adopted, and given in the first number and fifth page of the current volume of this journal. In this plan the labor and tediousness in the first working is much abridged, and can be done by the younger or aged hands, and after a little practice, becomes less irksome, and not such a tedious job after all. Try it, and let us hear of your success through the columns of this paper.

C. N. BEMENT.

Three Hills Farm, May, 1843.

Southern Planter.



WEDNESDAY, JULY 5, 1843.

BACK NUMBERS.—All new subscribers to the "Southern Cultivator" can be supplied with the back numbers.

MARL.

In presenting to the readers of the "Cultivator," the communication of "A BURKE PLANTER" on the subject of Marl, we take great pleasure in calling their attention to its contents.—Regarding as we do the subject of manuring as of the highest importance to the whole planting community of Georgia—particularly those sections long settled—we cannot better devote our space than to its elucidation. For upon the successful application of manure depends, in a great degree, the arresting of that continual tide of emigration westward, which is constantly and rapidly depriving us of our best and most enterprising citizens, and in an especial manner does the prosperity of the State and the success of the great agricultural interests depend upon the adoption of an enlightened system for the improvement of lands. Entertaining these views of the great importance of this subject to our planters, we welcome most cordially "A BURKE PLANTER" to our columns, and trust he will not cease his labors in so good a cause, but continue to enlighten us and our readers upon a subject with which he appears so familiar. We have indeed much need of such laborers in the field, and we sincerely hope he may not stop by the way side, but continue his efforts until he has induced others to join him in this great and important work of resuscitating the exhausted lands of Georgia.

TO STOP BLEEDING AT THE NOSE.—An acquaintance called a few days since to say, that one of his family having suffered from a profuse bleeding at the nose, after a fruitless resort to various remedies, some one laughingly suggested that the patient should hold up his left hand, a remedy that had been recommended some where in the newspapers: the suggestion was laughingly adopted, and the effect was no less surprising than satisfactory. Our informant only vouches for the fact that in this case the bleeding ceased after the hand had been held up for about three minutes. Whether the relation of cause and effect exists, or whether it will ever happen again he does not pretend to say.—*Southern Planter.*

COTTON BAGGING.

To the Planting Interest of South Carolina, on the manufacture of COTTON BAGGING *from inferior Cotton.*

During a recent journey to the southwest, I travelled with a gentleman, whose sagacity, information and practical experience, appear but as hand-maids to his usefulness and philanthropy.

The conversation turning on the condition of the Southern States, on the Atlantic, growing cotton; it was observed, that the desideratum at present of such importance, would be to manufacture with our inferior qualities of cotton, our own cotton bagging. The low price obtained for cotton, made this economy indispensable—also from our inability to compete, or keep pace with the richer soils of the southwest, where quantity compensated for price, from there being no chance in the scheme of compensations, in the administration of government, or acts of Congress, of receiving any equivalent—or any equivalent from the States that are now protected in the manufacture of bagging. Every view of the subject shewing the necessity of great economy, as far as South Carolina is concerned, and this branch of industry deserves immediate and strict attention.

My companion, who is an old and respectable merchant, and extensive ship-owner, has devoted some reflection to the subject I now bring before your country readers. As a cotton buyer, he says, he would prefer to purchase cotton packed in such domestic bagging, as can be easily manufactured in the State where cotton is produced, to that packed in hemp bagging, either foreign or American. This preference is given, because it is less liable to damage than hemp bagging, which from exposure is constantly apt to rot.

But this preference is given, provided care and skill are used to give the bagging made of cottod proper strength. This can be done, by attention in the first place, in making *a clean, pure warp or chain, free from defect and strong*—this part of the manufacture requiring most of the attention. The *thread* to be made about the same as that of the hemp bagging, and the square yard to weigh also about the same.

The additional advantage to which particular attention is invited, is, *to the filling or woof*, which requires less labor than that usually bestowed on it, *being only twisted sufficiently as not to be broken by the shuttle;* for this the most inferior cotton will answer, and the bagging thus made, will be found to resist the wear and tear to which it is always subjected, and most of all, from the iron hooks used by the laborers—the tenacity or elasticity from the manner recommended, being greater than that of the bagging in use.

This is the result of experiment. As a large ship owner for many years, the attention of my friend was turned, consistently with his interest, to examine and test the various specimens of sail cloth, so as to select the choicest kind of that necessary outlay for ships. In this examination, English, American, French, Russian and Dutch were tested; the last was found to resist time and friction and superior to the rest, and in looking to the cause of its superior usefulness, it was at once seen, that while the greatest care in the manufacture was given to the chain or warp, the filling or woof was *loosely* put in, precisely as is now recommended to those who are willing to manufacture bagging after this manner; and from this statement, it appears obvious that the same results will advantageously follow the mode above detailed.

The cost of machinery, it is said, cannot exceed $1500, to those who enter into it exclusively as a business; but to the planter who is in the habit of manufacturing his domestic cloth, the additional expense to what is so provided, will not be much.

It is out of place here to show, that our small and suffering State pays about four per cent on value of the cotton crop, to foreign countries and to Kentucky, for the greatest part of which she receives no equivalent whatever, in the shape even of barter; and for which she pays in gold and silver, or its equivalent. If from three to four hundred thousand dollars, so paid annually, can be saved by domestic industry, it becomes highly necessary to make the effort.

CAROLINA.

Southern Agriculturist.

CRITERION FOR JUDGING STOCK.

At the annual meeting of the State Agricultural Society of New York, held in January last, the writer called the attention of the Society to the propriety of erecting a standard of form, and every point necessary to constitute a perfect animal, to be noticed according to its influence, in the decision of the judges. This excited considerable interest, and elicited some debate as to the manner in which it could be accomplished, and finally resulted in the following resolution, offered by Mr. Rotch:—

"*Resolved*, That the Executive Committee be requested to call a meeting of breeders, at such time and place as they may deem proper, for the purpose of discussing the different points of merit in domestic animals, with a view of arriving at some definite opinion as to the points most desirable to be obtained in breeding."

As this subject is not only a very interesting, but a very important one, and requires some investigation, I am induced to throw out some hints and solicit the opinions and ideas of others on the subject, through the columns of this journal.

Suppose, for instance, to illustrate my ideas, the following should be agreed on as the points, as far as they go, for comparison, of horned cattle, and that animals possessing the greatest number of these points, shall be considered most meritorious:—

1. Head small, with a bright and prominent eye.
2. Hams small and tapering.
3. Neck small where it joins the head—large where it joins the shoulders.
4. Brisket broad, deep, and projecting well forward.
5. Shoulders full and no hollows behind them.
6. Body deep, round and capacious.
7. Legs short, full and muscular above the knee—small below.
8. Loins wide, and broad between the hips.
9. Flank well let down.
10. Tail set on even with the line of the back, small and tapering to bottom.
11. Though last not least, a soft supple skin covered with a soft silky coat of hair.

Central N. Y. Farmer.

PLASTER.—A young farmer desires to know how he shall use plaster. Our advice to him is, to use it freely on all his crops, our opinion being, that, at the rate of a bushel to the acre, it will do good to any crop, and the more where the land may have been previously limed. Let him mix it in the proportion of one bushel to twenty cartloads of manure, as he may be preparing his manure to be hauled out, or sow it, in that proportion, after his manure may be spread out, and previous to its being ploughed in: let him spread it on the surface of his ground after being ploughed, and then to be harrowed in: let him put it, mixed with ashes, in the proportion of one bushel of plaster to five of ashes, in his corn hills, or potato rows, graduating the quantity of the mixture to a gill for each corn hill or potato set: let him sow it in the first named proportion over his grain fields, his meadows, and his old fields, and he cannot go amiss. The range we have here marked out, is extensive, but not more so than it is calculated to do good in: and, in a word, we will say to our inquirer, that he will find it to his interest to sow

it any where, where he may have growing crops, as it will attract moisture and food from the air and from the earth, and like a good nurse, dispense it to the growing plants in such proportions, and at such times, as may be required by their wants.

But while the agricultor may be providing plaster, let him not forget that it always acts best where, as we have before premised, the land may have been previously limed.—*Am. Farm.*

To Clean Looking Glasses.—Take a newspaper or a part of one, according to the size of the glass. Fold it small, and dip it into a basin of clean cold water. When thoroughly wet, squeeze it out in your hand as you would a sponge, and then rub it hard all over the face of the glass, taking care that it is not so wet as to run down in streams. In fact, the paper must be only completely moistened or damped all through. After the glass has been well rubbed with the wet paper, let it rest a few minutes; and then go over it with a fresh dry newspaper (folded small in your hand) till it looks clear and bright—which it will almost immediately, and with no farther trouble.

This method (simple as it is) is the best and most expeditious for cleaning mirrors, and it will be found so on trial--giving a clearness and polish that can be produced by no other process. It is equally convenient, speedy, and effective. The inside of window panes may be cleaned in this manner, to look beautifully clear; the windows being first washed on the outside. Also the glasses of spectacles, &c. The glass globe of an astral lamp may be cleaned with newspaper in the above manner.

Dusting Furniture.—If a hand-brush is used for dusting furniture, it should always be followed by a dusting cloth. A brush merely disturbs the dust without taking it up or absorbing it; and is only useful in dislodging it from crevices. Therefore, if the dust is not afterwards wiped up in a cloth (which should be frequently shaken out of the window) it floats about the room, and settles again; being only removed from one place to spread itself on another. A yard of sixpenny calico will make two small dusters, or one large one. They should be hemmed, that the servants may not regard them as mere rags, to be torn up, or thrown away when dirty.

Miss Leslie's Magazine.

How to Mesmerise Lice on Plants.—A correspondent of the Macon Telegraph says:—"If you think the following is worth any thing, you can let your readers see it. I don't think there is any mistake in the matter. I tried it on two plants that were covered with lice, and out of the whole number I could not find one live one. I have found great difficulty in saving rutabaga seeds, and this year they were ruined before I could find a remedy. After trying a great many other things, I thought of the following, tried it, and found it effectual.

Take a little barrel that has but one head, and enclose the plant that contains the animals to be mesmerised under the barrel, then with a pipe, (or in any other way,) fill the barrel with tobacco smoke, then draw the dirt carefully round the mouth of the barrel, so as to prevent the escape of the smoke. Let the barrel continue there for twelve hours, (perhaps a less time would answer,) and it will be found that the animals are one and all completely mesmerized. No mistake about this matter. So if plants that have been left for seed are treated in this way, it will be found that their liceships are completely disqualified for doing mischief."

A correspondent of the Albany Cultivator says—"I have at various times tried several expedients to destroy caterpillars, and among other things turpentine, sulphur, &c., but have invariably failed, until I discovered that the spirits of hartshorn, applied by means of a sponge attached to the end of a pole, and thrust into the midst of the web, caused instantaneous death to all living matter it touched."

FEEDING HORSES.

Various opinions are entertained as to the best and most economical mode of feeding horses, and many experiments are on record that have been instituted to settle the question. The result seems to be, that at the ordinary prices of grain and hay, it is cheaper to keep horses on grain, than on hay, or on hay and grain. There is another important matter to be considered, however, and that is, is feeding entirely with grain, as conducive to the health of the animal, as a mixture of hay and grain. We do not believe it to be; and the general result of the experiments has been to show that it is not. Our own experience too would lead us to speak decidedly upon this point. We have tried feeding horses upon grain alone, and upon grain and hay, and found the latter the best for the animals. They were not so shrunk up or gaunt, there was more muscle and consequently more weight, and whatever may be thought of this latter quality in a race horse, where nothing but sinews and bones are required, every farmer knows that the road or farm horse is worth but little without weight. Feeding horses on grain alone, is like keeping a man on wheat bread solely; he will live for a time, but will finally sink under the experiment. In this case, the finer the flour the worse for the man. We have never had horses in better condition for labor, than when we have fed them with cut wheat staw, wet up in a tub with Indian corn meal.—It is evident there must be some proportion between the bulk and the nutritive power of food, and grain alone gives too much nutritive matter for the bulk. Oats, perhaps, approach nearer the standard than any other grain; but the use of these alone, will in a long run be found unadvisable.

One of the most carefully conducted experiments we have noticed, was the one made by Mr. Brotherton, near Liverpool; and he came to the conclusion that horses cannot be kept in a condition fit for work, if fed on grain alone. For nine years, Mr. Brotherton allowed eight horses three Winchester bushels of oats and one of beans, but no hay or chaff During this period he annually lost more or less horses, which he attributed to the quantity of grain being greater than the stomach could digest. This induced him to adopt feeding hay with his grain in the following proportion:—To eight horses he allowed one bushel of oats, one bushel of beans, and three bushels of cut hay, straw or clover; and he found them better able to do their work than before, and for several years after adopting the plan, lost but one horse from disease. Farmers, we are confident, have much to learn on the subject of feeding animals, and the health and good condition of the latter will, we doubt not, be found compatible with greater degrees of economy than has generally been practiced.—*Albany Cultivator.*

Wire Worms.—A friend has given us an account of an experiment made the past summer to prevent the depredations of the wire worms. A farmer had the previous year applied to a part of his corn, manure from the hog pen in which there was an abundance of cobs, and where this manure was used no injury was done by wire worms, while other parts were much injured by them where other manure was.

Supposing that the protection was owing to the cobs, he made an experiment the past season by putting two or three cobs into each hill, among the manure which was not from the hog-pen, on a part of the piece, and the rest of the piece was manured in the same manner, excepting the cobs-

Where the cobs were the corn succeeded well, and was not injured in the least by worms; while on that part where no cobs were used the wire worms did much damage. On taking up the cobs and examining them it was found that the pith was full of wire worms.

From the result of this experiment' it seems that the worms prefer the pith of the cob to the corn, and that nature has wisely provided for the protection of corn, when the ears fall to the ground, and the corn grows spontaneously, as the worms will find their favorite food in the pith of the cob, which allows the corn to escape their depredations.—*Farmer's Journal.*

Corns.—The common bean leaf, bruised and applied upon corns every night on going to bed for about a week, is, it is said, a certain remedy for these troublesome excrescences.

Whitewash that will not Rub off.—Mix half a pail of lime and water ready to put on the wall; then take a gill of wheat flour, mix up well in a very little cold water, then pour boiling water over it till it thickens. Pour it into the the white-wash while hot, and stir the whole together.

Destroying Insects.—The Gardener's Gazette recommends, as one means of destroying insects that are injurious to fruit trees and vineyards, to light piles of brush-wood when they are about depositing their eggs, attracted by the light, they will fly to it by myriads, and thus perish in the blaze.

AUGUSTA MARKET.

Tuesday P. M., July 5.

Cotton—The stock of cotton in our market and Hamburg was, on the 1st instant, 12,540 bales, and we presume that not more than one half the quantity is on planters' account. Our market for the past fortnight has been rather dull, not over 1000 bales, and at prices about ⅛ @ ½ cent less than our highest rate. We quote 4½ @ 6½ cents as extremes of the market—principal sales 5¼ @ 5¾ cents.

Money—Exchange on New York, Charleston and Savannah remains at par. Central Bank notes sell from 10 @ 12 ℔ cent discount. State 6 ℔ cent Bonds are in demand and will readily bring 65 cents.

CONTENTS OF THIS NUMBER.

	PAGE.
Marl	105
Cure for the Bots; Cultivation of the Grasses; to Remove Fruit Stains; Cure for Wounds and Bruises on Horses; N. York Agricultural Society.	106
American Manufactured Silks; Preserving Eggs; Preserving Scythes, &c. from Rust	107
Judge O'Neall's Address	108
Bommer's Manure; Root Culture	110
Marl; to Stop Bleeding at the Nose; Cotton Bagging; Criterion for Judging Stock; Plaster	111
To Clean Looking Glasses; Dusting Furniture; How to Mesmerise Lice on Plants; to destroy Caterpillars; Feeding Horses; Wire Worm; Remedy for Corns; Whitewash that will not rub off; Destroying Insects; Augusta Market	112

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COMMUNICATIONS.

GREENSBORO', July 10, 1843.

Messrs. EDITORS—The subscriber, living on the confines of the pleasant and healthy village of Greensboro', has there adjoining, and subdivided by the road leading to Park's Bridge, a large body of land, say some 14 or 1500 acres. These lands have been the best in the up country of Georgia, and land that has been good is more easily reclaimed, or made good, than that which has been originally poor. Now the owner of these lands just begins to find that it is the effort to cultivate too much land that is the ruin of Southern planters, and therefore, offers *for sale* the south half, say all on the south side of said road leading to Park's Bridge, containing about 700 acres, capable of being greatly improved, lies well, and the Georgia Rail Road running through it, which makes any land, however objectionable to some, more valuable.—These premises have all the necessary out buildings for a planter, except a good dwelling house, and there is a beautiful site for that. I propose to sell to some one that will be my competitor in the laudable enterprise of improving southern soil.

I think I can make off of my reserved half, more than I have done, in the old way, from the whole, and if I can get my man to set up side by side, me thinks we will provoke each other good works. Perhaps one way to do this is to learn to cultivate the soil, yes, southern soil, that which has been a good servant, but in the hands of hard task masters.

Now you and your readers will think this, the first from your new correspondent from Old Green, as a queer advertising sort of a production. Perhaps it is so, but the writer has been excited so to write, after reading a piece, and though laughable is yet not the less true, to be found in the Albany Cultivator, while conducted by the venerated Judge Buel, Vol. V. No. 10, called the "Looking Glass," and which I should be pleased to see copied for your readers.

And now, Messrs. Editors, in conclusion, I again say, send me my man; no Nick Bradshaw of a fellow, but the honest-hearted, industrious Horton, not afraid or ashamed to work, and work it right too, and I will give him, for a small consideration, a fair chance to have a home, yes, a "sweet home" as ever blessed any farmer, and we will vie with each other in the

"Delightful task,
To rear the tender stalk,
To teach the young plant how to shoot."

JNO. CUNNINGHAM.

The following is the article alluded to by Mr. Cunningham.

A LOOKING GLASS.

J. BUEL, Esq.—Dear Sir—When I was a boy, I can well remember how I used to be induced to wash my smutty face, by having a looking glass held before my eyes. For the same purpose, I have extracted the following picture of "a farmer," from the writings of that most eccentric and excellent writer, "Samuel Slick," in the hopes that if any of your readers should happen to see any part of himself therein, that he will improve by the view. Here it is.

"* * * That critter, when he built that wrack of a house, (they call 'em a half house here,) intended to add as much more to it some of these days, and accordingly put his chimbley outside, to sarve the new part as well as the old. He has been too "busy" ever since, you see, to remove the banking put there the first fall, to keep the frost out of the cellar, and consequently it has rotted the sills off, and the house has fell away from the chimbley, and he has had to prop it up with that great stick of timber, to keep it from coming down on its knees altogether. All the winders are boarded up, but one, and that might as well be, for little light can penetrate them old hats and red flannel petticoats. Look at the barn; its broken back roof has let the gable eends fall in, where they stand staring at each other, as if they would like to come closer together (and no doubt they soon will,) to consult what was best to be done to gain their *standing* in the world. Now look at the stock; there's your "improved short horns." Them dirty looking, half starved geese, and them draggle-tailed fowls that are so poor the foxes would be ashamed to steal them—that little lantern jawed, long leg'd, rabbit ear'd runt of a pig, that's so weak it cant curl its tail up—that old cow frame standing there with her eyes shut and looking for all the world as tho' she's contemplating her latter eend—(and with good reason too,) and that other reddish yellow, long wooled varmint, with his hocks higher than his belly, that looks as if he had come to her funeral, and which by way of distinction, his owner calls a horse—is all "the stock," I guess, that this *farmer* supports upon a hundred acres of as good natural soil as ever laid out door. Now there's a specimen of "Native Stock." I reckon he'll imigrate to a warmer climate soon, for you see while he was waiting to finish that thing you see the hen's roosting on, that he calls a sled, he's had to burn up all the fence round the house, but there's no danger of cattle breaking into his fields, and his old muley has larnt how to sneak round among the neighbors' fields o' nights, looking for an open gate or bars, to snatch a mouthful now and then. For if you was to mow that meadow with a razor and rake it with a fine tooth comb, you couldn't get enough to winter a grasshopper. 'Spose we drive up to the door and have a word of chat with Nick Bradshaw, and see if he is as promising as outside appearances indicate.

Observing us from the only light of glass remaining in the window, Nick *lifted the door* and laying it aside, emerged from his kitchen, parlor and smokehouse, to reconnoitre. He was a tall, well built, athletic man, of great personal strength and surprising activity, who looked like a careless good natured fellow, fond of talking, and from the appearance of the little old black pipe which stuck in one corner of his mouth, equally so of smoking; and as he appeared to fancy us to be candidates, no doubt he was already enjoying in prospective the comforts of a neighboring tap room. Jist look at him—happy critter—his hat crown has lost the top out, and the rim hangs like the bail of a bucket. His trowsers and jacket show clearly that he has had clothes of other colors in other days. The untan'd moccasin on one foot, which contrasts with the old shoe on the other, shows him a friend to domestic manufactures; and his beard is no bad match for the wooly horse yonder.—See the waggish independent sort of a look the critter has, with his hat on one side and hands in his breeches pockets, contemplating the beauties of his farm. You may talk about patience and fortitude, philosophy and christian resignation, and all that sort of thing till you are tired, but—ah, here he comes. Morning Mr. Bradshaw—how's all home to-day? Right comfortable, (mark that—comfort in such a place,) I give thanks—come, light and come in. I'm sorry can't feed your hoss—but the fact is, tan't bin no use to try to raise no crops, late years, for body don't git half paid for their labor, these hard times. I raised a nice bunch of potatoes last year, and as I couldn't get nothing worth while for 'em in the fall, I tho't I'de keep 'em till spring. But as frost set in, while I was down town 'lection time, the boys didn't fix up the old cellar door, and this infarnal cold winter froze 'em all. It's them what you smell now, and I've just been telling the old woman that we must turn too and carry them out of the cellar, 'fore long they'll make some of us sick like enough—for there's no telling what may happen to a body late years. And if the next legislator don't do something for us, the Lord knows but the whole country will starve, for it seems as tho' the land now a days won't raise nothing. It's actually *run out*. Why, I should think by the look of things round your neighbor Horton's, that his land produced pretty well. Why, yes—and it's a miricle too, how he gets it—for every body round here said, when he took up that tract, it was the poorest in the town. There are some folks that thinks he has dealings with the "black art," for't does seem as tho' the more he work'd his land, the better it got.

Now, here was a mystery—but an easy explanation of Mr. Slick soon solved the matter, at least to my mind. The fact is, says Mr. Slick, a great deal of this country is *run out*.—And if it warnt for the lime, marsh-mud, sea weed, salt sand, and what not, they've got here in such quantities, and a few Hortons to apply it, the whole country would *run out* and dwindle away to just such great, good natured, good-for-nothing, do nothing, fellows as this Nick Bradshaw, and his wooly horse, and woolless sheep, and cropless farm, and comfortless house, if indeed such a great wind rack of loose lumber, is worthy the name of a house.

Now, by way of contrast to all this, do you sse that neat little cottage looking house on yonder hummock, away to the right there, where you see those beautiful shade trees. The house is small, but it is a *whole* house. That's what I call about right—flanked on both sides by an orchard of best grafted fruit—a tidy flower garden in front, that the galls see to, and a most grand sarce garden jist over there, where it takes the

wash of the buildings, nicely sheltered by that bunch of shrubbery. Then see them everlasting big barns—and by gosh, there goes fourteen dairy cows—as sleek as moles. Them flowers, honeysuckles and rose bushes, shows what sort of a family lives there, just as plain as straws show which way the wind blows.

Them galls an't 'tarnally racing round to quiltin and husking frolics, their feet exposed in thin slips to the mud, and their honor to a thinner protection. No, no, take my word for it, when you see galls busy about such things to home, they are what our old minister used to call "right minded." Such things keep them busy, and when folks are busy about their own business, they've no time to get into mischief.—It keeps them healthy, too, and as cheerful as larks. I've a mind we'll 'light here, and view this citizen's improvements, and we shall be welcomed to a neat substantial breakfast, that would be worthy to be taken as a pattern by any farmer's wife in America.

We were met at the door by Mr. Horton who greeted my friend Slick with the warm salutation of an old acquaintance, and expressed the satisfaction of one habitually hospitable, for the honor of my visit. He was a plain, healthy, intelligent looking man, about fifty, dressed as a farmer should be, with the stamp of "HOME-SPUN" legible upon every garment, not forgetting a very handsome silk handkerchief, the work throughout of his oldest daughter. The room into which we were ushered, bore the same stamp of neatness and comfort that the outside appearance indicated. A substantial homemade carpet covered the floor, and a well filled book-case and writing desk, were in the right place, among the contents of which I observed several agricultural periodicals. I was particularly struck with the scrupulously neat and appropriate attire of the wife and two intelligent, interesting daughters, that were busily engaged in the morning operations of the dairy. After partaking of an excellent substantial breakfast, Mr. Horton invited us to walk over his farm, which, though small, was every part in such a fine state of cultivation, that he did not even express a fear of "starving, unless the legislature did something to keep the land from running out."

We bade adieu to this happy family, and proceeded on our journey fully impressed with the contrast between a good and bad farmer, and for my own part, perfectly satisfied with the manner that Mr. Slick had taken to impress it indelibly upon my own mind.

Mr. Slick seemed wrapped in contemplation of the scenes of the morning for a long time. At length he broke forth in one of his happy strains. "The bane of this country, 'Squire, and indeed of all America, is having TOO MUCH LAND—they *run over* more ground than they cultivate and crop the land year after year, without manure, till it is no wonder that "*it's run out.*" A very large portion of land in America has been "run out," by repeated grain crops and bad husbandry, until a great portion of this great country is in a fair way to be ruined.—The two Carolinas and Virginny are covered with places that are "run out," and are given up as ruined, and there are a plagey site too many such places all over New England, and a great many other States. We havn't the surplus of wheat that we used to have in the United States, and it'll never be so plenty while there are so many Nick Bradshaws in the country.

The fact is, 'Squire, edecation is ducedly neglected. True, we have a site of schools and colleges, but they an't the right kind. That same Nick Bradshaw has been clean through one on 'em, and 'twas there that he larnt that infarnal lazy habit of drinking and smoking, that has been the ruin of him ever since. I wouldn't give an old fashioned swing tail clock to have my son go to college where he couldn't work enough to arn his own living, and larn how to work it right tu.

It actilly frightens me when I think how the land is worked and skinned, till they take the gizard out on't, when it might be growing better every day. Thousands of acres every year are turned into barrens, while an everlasting stream of our folks are streaking it off "to the new country," where about half on 'em after wading about among the tadpoles, to catch cat fish enough to live on a year or two, actually shake themselves to death with that everlasting cuss of all new countrys, the fever and agur. It's a melancholy fact, 'Squire, tho' our people don't seem to be sensible of it, and you nor I may not live to see it, but if this awful robbin' of posterity goes on for another hundred years, as it has for the last, among the farmers, we'll be a nation of paupers. Talk about the legislature doing something, I'll tell you what I'd have them do. Paint a great parcel of guide boards, and nail 'em up over every legislature, church and school house door in America, with these words on 'em in great letters—"*The best land in America, by constant cropping, without manure, will run out.*" And I'd have 'em, also, provide means to larn every child how to read it, cause it's no use to try to larn the old ones—they're tu sot in their ways. They are on the constant stretch with the land they have, and all the time trying to git more, without improving any on't. Yes, yes, yes, *too much land* is the ruin of us all.

Although you will find a thousand more good things among the writings of "The Clockmaker," I hope you will not look for a *literal* copy of the foregoing. And if ever this meets the eye of the writer of the "Saying and Doings of Samuel Slick," I beg him to excuse me for the liberty I have taken with his own language.

I remain your Agricultural friend,

SOLON ROBINSON.

CHEAP SUGAR BOILER.

Take two pieces of plank six feet long, sixteen or eighteen inches wide, two inches thick, dress them neatly, especially on the side intended for the inner part; take two other pieces, two feet long, dress in same way, cut in one inch two inches from the end of your side pieces, then put it together with 12d nails, forming a box two by six feet. This will form a box without lid or bottom. Now get you a piece of sheet iron, just three-fourths of an inch larger every way than your box; fasten the sheet iron on with 4d nails, at the distance of eight or ten inches, on the open side of the box, forming a bottom. Then turn down the ¾ inch all round, closing it fast at the surface with a hammer, and with a small punch insert holes of a size to receive a No. 12 tack, at the distance of ½ inch apart, which will effectually secure the sheet iron to the wood, and which will complete the boiler. Now for putting it up for use. Take brick and form an arch six inches smaller than the bottom of the boiler, which will give three inches bearing on each side; at each end the bearing should be 4 to 6 inches, and the front end of the arch should be built up to the top of the boiler, to prevent the fire from burning the wood, and at the end where the chimney is to be, the brick should also be built up between the boiler and the flue of the chimney. Thus you will see that the wood part of your boiler is entirely out of the reach of fire and will have no effect upon it.

If copper is thought to be preferable for boiling sugar, it can be put on in the same way.—You need have no fears that such a boiler will not answer the purpose. I have one that I boiled a large crop of turneps in last fall, which never failed in the least.

I make this communication for the benefit of those who have patches of corn planted for the purpose of making sugar this fall. The cost is but trifling and is in the reach of every farmer. It is good for many uses—on wash and scouring days you will find it quite the thing, and is excellent for boiling cow and hog food, &c.

A. GREENE.

P. S. The better plan is to get your sheet iron or copper first, then form your box ½ inch smaller, sides and ends.

Green Co., June 29, 1843.

STANFORDSVILLE, PUTNAM CO., July 8, 1843.

DEAR SIRS—I propose in this communication to give your readers my mode of planting and cultivating corn; but before I do so, I beg leave to return you my acknowledgements, and beg that you will excuse me for asking of you what you had previously promised. In a day or two after sending my first communication, I was looking over the fifth number of your paper and found that you had promised enough to encourage any planter that felt inclined to write for your paper, to do so mithout the least embarassment, and in your thirteenth number, you have renewed that promise without reserve, which induces me to try my hand again, and if my poor efforts should prove of any advantage to your paper, or any one of your readers, then I shall have done what I desire.

I will now return to my subject and, in the first place, say that my land is very broken, and for the purpose of preventing the hill side from washing off, I have got them nearly all ditched, consequently have to plant the most of my corn in drills, and always plant the land in corn that was in cotton the year before. I have the rows laid off seven feet apart, parallel with the ditches; make a bed with five scooter furrows, (deeply ploughed,) the bed is then split in the middle with a scooter plough, the corn is then dropt two feet apart, one to three grains in a place, and carefully covered with a hoe, (I never had a field of corn covered with the plough.) So soon as I get one field planted, the middle of the rows is broken up deep with scooter ploughs before we move to another field. By the time we have gotten through planting corn in this way, our attention is turned to that of preparing cotton land. By the time that is done and the cotton all planted, the corn, in good seasons, is all up and from 3 to 6 inches high. The ploughs are then put in the corn. I have colters put in good order to side the corn, run deep and close. The row is then ploughed deep with scooter hoes. The land should be properly and deeply broke by this plowing. I have my hoe hands to follow this plowing, thinning the corn out to one stalk in a place, and chopping out all the grass that may be in the drill, at the same time throwing some dirt around the corn. From fifteen to 20 days after this is done, the corn is from half leg to knee high. The shovel plows are then put in. A careful plower, with a good shovel plow, will run his furrows so as to make the dirt lap on the drill, which is about equal to a hoeing. This is the time for planting peas.—I have the rows plowed out, being careful to have the last furrow well thrown out; a hand

then follows and drops peas in said furrow; a plow then turns back and with one furrow covers the peas. If the ground is too dry for peas to come up, I have the rows left without the middle furrow being plowed out till rain, then one plow will run the last furrow in those rows as fast as a hand can drop the peas, and another plow will keep up with the covering. In fifteen or twenty days after the corn should have the last plowing, which is called laying by. This plowing may be done either with a shovel or sweep. My land being so broken, I generally give the last plowing with the shovel. After this much is done, when it is convenient, the hoe hands go over and chop round the peas and corn, cutting all weeds and large grass, if any.

I am well aware that this mode differs but very little from the general custom of cultivating corn. The difference is most in that of siding with colters, and many corn makers may side their corn with colters for aught I know, but I can say to those who never have tried siding young corn with colters, that if they will have colters made of a proper shape and try them, I am sure they will never repent it, especially those that have stiff land to cultivate.

It may seem to some at first thought, that seven feet wide for corn rows is giving too much distance; but a slight calculation will prove to them that 7 by 2 feet will give a good many more stalks on an acre than will be by 4 feet each way. By having corn rows less than seven feet wide does not do well for a pea row in the middle.

I am careful never to have my plows at work in my corn, or in any part of my crop, when the land is the least mirery. It is an injury to the crop as well as to the land to plow while it is too wet, especially land that has little or no sand in it.

It is well known to planters, that corn planted in the summer is of a more rapid growth than that planted early in the Spring. Perhaps there are but few that have taken any account how long it will take corn to come to rosting ears, planted at any season of the year. I have taken some account of this matter and am willing to give it to the public. Year before last I planted a lot that cows had been penned on, the 15th day of July, with the common gourd seed corn dry from the crib, and had roasting ears the 53d day after putting the seed in the ground. Last year I planted the same lot with the same kind of corn, and did not have roasting ears till the 64th day after planting—(last year it was planted the 4th day of July.) You will see there was a difference of 11 days. The difference was owing to the season—year before last it rained perhaps half the days in August, and the lot being on a hill side and very stony, could bear a shower every day or two. The ears were heavier and better matured last year than they were year before last. In both years, as the ears were pulled off for eating, (all hands had free access, both black and white,) the stalks were cut off at the ground and fed to the horses and hogs—every part was consumed by them to profit no doubt. The same lot was sown in barley each fall for the benefit of my poor calves, sheep, &c. I have planted the same lot in corn again this year, the 24th of June, and expect to continue it in producing two crops a year. I leave you to judge of its profitableness.

I beg leave to enquire, through your paper, if there are any of your subscribers who have the Kentucky Blue Grass in cultivation; if so, they will do me a favor by giving some account of it. I wish to get some of its seed, and would be glad to know how it thrives in this climate.

I also wish to know if any planter in this State has a corn and cob crusher; if there is one, I should be glad to know if such a mill is durable, and if they will crush the cobs small enough to be ground to meal in a grist mill? I have no doubt of the great saving planters could make by having such a mill, if they can be made to be durable and crush cobs small enough to be made with grain to meal in a grist mill. Horses or cows will eat every particle of corn cobs if soaked in salted water till they become soft. I have seen statements made, going to prove that there is one third as much nutriment contained in the cob as there is in the grain of corn that covers the cob. Whether this be a fact or not, I am not able to decide, but I have no doubt but there is considerable nutriment in cobs.

I am, sirs, yours respectfully,

JOHN FARRAR.

HOUSTON COUNTY, GA., June 29, 1843.

Importance of Hogs.—How the People of Georgia are imposed on by Spurious Breed, &c. &c.

To the Editors of the Southern Cultivator:

It is no longer a question in Georgia, should the cotton planter of the South raise his *bacon?* By long and sad experience the Georgia cotton planter has found it to be to his advantage to raise his own bacon: nay more, it is with him now a matter of the first magnitude, for without the article he cannot raise cotton. Bacon, from long experience, is known to be the most healthy *meat* diet in the world, particularly for negroes, who do most of the labor on cotton plantations; and as long as the negro children are fed bountifully upon bacon and bacon grease, &c., they are not attacked with worms; and it is a fact well known to physicians, that near one third of the deaths of negro children, from two to seven years old, are from worms. Good old fat bacon is (not a remedy, but) a preventive of that formidable disease. Being raised in the South, near the Atlantic, amid large and extensive plantations of negroes, my experience (not much circumscribed,) can testify to the truth of the above remark. In that region of country I observed, early in life, that the fatality of the negro children, caused by worms, was in equal ratio with the amount of bacon diet furnished them. The above remark is founded in truth, and will be made more evident by experience in future, and I consider the subject of great moment in subserving the ends of religion and humanity.

In order for the cotton planter to produce this article, so indispensible to his welfare, it is plain that the first step after making an abundance of all kinds of grain, is to procure the best breed or stock.

The very laudable and praiseworthy spirit manifested (only a year or two past) among our planters, to procure and raise a genuine stock, has exposed them to unpardonable impositions, equally as disgraceful as that one of *wooden nutmeg* memory.

Since this noble spirit has manifested itself among the planters of Georgia, from whence have they obtained their *blooded hogs?* Answer, from the Western States principally, and they have in like manner obtained their breed from the Northern States, and these have, in like manner, been supplied from the fountain head, Old England. Now soon as any one of us obtains one of these genuine animals, the next thing done is to *cross* the breed with our *scrubs*, and the same thing is done in all parts of the country. This spurious and mixed breed, pampered from the start, is, by our more enterprising bretheren of the West, hurried across the Cumberland Mountain, down into the beautiful and fertile plains of Georgia, with the name and character of the genuine stock. The credulous and unsuspecting Georgian, (with the milk of human kindness overflowing,) becomes the dupe of his more keen and sagacious neighbor of the west, and instead of getting the genuine blood he has only the half, and perhaps the quarter breed. For the stock, nine times in ten, was first mixed in the Northern States, secondly in the Western States, and hence we see a spurious and wretched breed of hogs, after much expense, swarming about almost every plantation in Georgia, to the great disappointment and injury of all. A continuation of such disappointments will humble that zeal and emulation which has just taken such favorable hold among our planters, and in disgust they will return again to their old station. Whoever will take the trouble to read the "Sketches of Travel," by Captain Barkley, an English agriculturist, through several of the United States, will become more acquainted with the humbuggery practised on us in the *articles* Grazier and Berkshire hogs, Saxon and Merino sheep, Durham cows, &c. The want of direct importation has made the Southern States "hewers of wood and carriers of water" for a long series of years.—Why have the people of Georgia been dependent on States 600 miles distant, for hogs of a spurious breed? Where is our much neglected but much beloved Savannah? as fine a sea port as any on the borders of the Atlantic, within the boundry of our State, to which we can, if we wished, have the genuine stock of every kind imported direct from any part of the English Islands, in from thirty to forty days. Why not avail ourselves of these signal advantages, which the Western States do not and cannot enjoy? But rather than import the genuine breed ourselves, we have preferred, heretofore, to pay extravagant prices for the *half* and *quarter breeds*, and hence we hear the remark almost in every company we approach, that "it is all a multicaulus speculation." But I am glad to know there is yet intelligence enough left among some of us to estimate these matters properly.

When will the unsuspecting planters of Georgia arouse from their slumbers, so opposed to the interests of us all?

I have no doubt that if we had the genuine breeds, we could raise hogs, sheep, cattle and horses in Georgia to as great perfection as in any part of the world, and it will certainly not be contended by any, that it is not to our advantage to do so, at least for our own supply.—From some little experience I am confident we can raise double the quantity of pork with the same amount of grain, from the genuine breed, than we can with our old common stock. With good common crab grass pastures, (which every planter in Georgia can have,) it is surprising to see how little grain will make the hogs grow and thrive. This remark is not intended to be applied to the spurious breed.

Georgia is one among the finest countries on the globe, the soil is naturally rich in most parts, and in order to see her favorable position relative to climate, all that is required is to cast the eye on one of her maps. Her mountains almost groan with the weight of the precious metals contained in their bowels. The gold richer than the "gold of Ophar" is here, and here we can have "cattle upon a thousand hills."

A Lover of Good Ham.

Athens, July 11, 1843.

Dear Jones—Our farmers have generally made wheat of better quality this year, than they have done for several years past. The fact which I wish made known is, that the crops produced from seed which had been soaked in a solution of blue stone, or in a strong brine, *and* rolled in lime, had *no* smut, whilst some crops, from seed with which no such precaution had been used, were rendered worthless by smut.

I raised in my garden last year, about half a peck, of a very fine white, flint wheat. This I put into a saturated solution of salt in water, the night before sowing. The next morning, in my absence from home, my old man began to sow it (in drills)—on my return I immediately arrested him, and made him roll the remainder in dry, air-slacked lime. Of that from seed *without* the lime nearly a fourth of the heads were *smut*, of the remainder, *not a head*. I sowed it on rather thin soil, in drills about 20 or 24 inches apart, made with the point of a garden hoe, covered it lightly, and spread on the surface a very little fresh stable manure, and covered the manure with powdered charcoal. The exceeding cold weather of the winter did not seem to affect it at all. It came in a fortnight earlier than the *red May*, (the common crop of the country,) and yielded me, notwithstanding the loss of the smutted heads, nearly five bushels.—The ground less than one quarter of an acre.

Whilst making you a *communication*, it may not be amiss to say, that I procured Bommer's method of making vegetable manure, and made an experiment on *tan bark*, before I saw, in the Albany Cultivator, Mr. B.'s opinion of the project. I have not yet tested the fertilizing properties of the compost, but from the trial of the *method* I have made, I entertain no doubt of its entire success in converting *straw*, cornstalks, shucks, &c. into perfect compost, and in the time prescribed. But one fact the farmer should know, and that is, that it can only be made at a *branch* or *creek*. And before the method is bought, the farmer must consider whether his farm or field is so situated with respect to a stream of water, that he can *profitably* transport his stalks, straw, &c. to the stream, and afterward convey the manure to his field, in all which distance and the declination of the hill are important matters.

In an extract in your last paper on this subject, is the remark, that this vegetable manure "may be made *any where*." This may be *literally* true, but the trouble of *hauling* the water to the heap, is tenfold the labor of hauling the material to the water; for it requires something like 1500 or 1800 gallons of water to apply to 1000 lbs. of straw. H.

My *Berkshire sow* does not *breed*—what is to be done in such a case? She is in possession of all the appetences and advantages in such cases made and provided.

COTTON BAGS.

Georgia Cottons, although desirable in foreign markets for quality, are derided for the bungling and awkward manner in which they are packed up. The round bales of Georgia are scouted at by buyers, whenever cotton of equal quality can be got in square bales. The planters of Georgia are far, very far behind their neighbors, if not in the culture of our staple, at least in their manner of preparing it for market. There is no excuse for them in persisting in this barbarous mode of packing cotton, and making themselves not only subject to reproach and ridicule, but very materially effecting their pecuniary interest. In sea ports, whether at home or abroad, a Georgia planter is considered as a slovenly farmer, one who is behind the age, and who can neither profit from experience or observation; and for no other reason, but because his cotton, which is equally clean and as well ginned as the cotton from other States, comes to market—in the uncouth, cumbersome and unhandy form of *round bales*.

We have taken some pains to collate a few facts, which we trust will not be wasted on our country friends.

The receipts of cotton the past season in Macon, will be from ninety-three to ninety-five thousand bales, of which quantity fully 75 per cent are packed in round bales. The difference in freight between round and square bales from Macon to Savannah by the rail road is in favor of square bales 25 cents. From Savannah to any port in Europe ¼d per lb.—$1. And a preference is always given by purchasers to square bales of at least ⅛ cent per lb. for the reason that cottons thus packed always go to market in better order. The Georgia planter is a sufferer in another way, in consequence of the bulk of cotton coming from the up country into Savannah in round packages. There is less competition in that than other Southern markets, for the reason that round bales do not suit the continental markets in Europe, consequently the many ships which are loaded for the continent, go to Charleston, Mobile and New Orleans for their cargoes, that would come to Savannah, if the crops were packed in square bales. At present there are but two markets for Georgia cotton—our domestic manufactor and Liverpool—the former being so small a competition, we are left almost entirely to the mercy of the Liverpool merchant.

We hope to see this evil, if not removed, at least very materially corrected the ensuing season. It strikes us that the Savannah merchant can apply a more effectual remedy to this mischief. Let him make the difference in prices for cotton packed in square and round bales, greater than it even now is, and the stubbornness and prejudices of our planters for antiquated and old fashioned notions, will have to yield to considerations of interest.—*Macon Mess.*

MULES.

The following, cut from a Prince George's paper, on the comparative value and economy of the horse and the mule, has been kindly forwarded to us, for the Cabinet, by the writer, J. S. Skinner:

Review of the premiums offered by the Agricultural Society of Prince George's County, Md.—For the best Jack $5; *for the best Jenny* $5; *for the best pair of Mules* $5.

The prejudice against the mule seems to be as inveterate as that which impels the heel of every son of Adam to "bruise the serpent's head," whether it be the head of the innocent water or the harmless black snake, or the viper or copper head, bloated with poison.

Instead of this invidious distinction by the committee in favor of the horse, offered the highest premiums for that very expensive animal, in all his ages, forms and sexes, young and old, quick and slow, male and female, it were better, we should think, to have held up the highest premium to him whose *mule power* should bear the greatest, and *horse power* the least, proportion, the one to the other, in use on his plantation! As for rewarding the mere exhibition of the "best pair of mules," what length of merit can be discerned in that, unless it be that it implies length of purse to give the highest price? If driven to the ground in the owner's own carriage, in lieu of a pair of $500 Vermont horses, that would be quite a different matter. The mode of taking the last census was very defective in many respects. For example, it only gives us the number of horses and mules in the aggregate; while here, at once, is an agricultural problem, which requires for its investigation that we should have accurately and separately stated the number of each.

Twenty years ago it was estimated that the horses in England consumed the product of twenty millions of highly cultivated acres; and Sir John Sinclair calculated the keep of one horse to be equal to the product of five acres. Let us suppose constant work to be provided, as it should be, for every horse that is kept on a plantation; does not true economy, as well as humanity and justice, demand that each horse so worked should be well fed? And if so, may not each horse be estimated to consume, at two and a half gallons a day, $56 of corn. Add to this $14 for other provender, and shoeing, and physicking, and you have an outlay of not less than $70 a year for every work horse, to say nothing of idle brood mares, colts, carriage horses, and other *non-producers;* a sum for each horse equal to the purchase of a first-rate mule, while the average life of the former will not more than half equal that of the latter.

Among planters in the South, whose position and circumstances are so identical with those of Maryland, the economy and advantage of the mule over the horse are universally admitted. The report of an Agricultural Society of South Carolina, in relation to this subject, may here be quoted where it asserts: "The mule is more easily raised than the horse, more able to bear heavy burdens, equally strong for the draught, more patient, equally docile, will live twice or thrice as long, capable of enduring much more labor, will do as much work in the same time, and will not be more than one-half the expense, as they will not eat more than one-half the grain, will make use of long forage, which the delicacy of the horse will reject, and will bear the heat full as well, perhaps better."

Should not these considerations induce planters to ponder and reflect how far it is expedient to aggravate, by their highest honors and rewards, that natural and costly predilection of our countrymen for horses, which may be said already to amount to a passion—one which had its origin in deeds and days long past of

Christian service and true chivalry;

but no more congenial with this utilitarian, money saving age of ours, than would be the vagaries of the Knight of La Mancha himself?

The last census gives for Prince George's county, Md., 4618 horses and mules. This we believe to be much short of the real number.—The aggregate of both for the State is returned at 92,220.

It is not extravagant to assume that 60,000 horses in Maryland might be well superseded by mules; and taking only ten dollars as the clear saving of each, here would be a reduction of annual expenditure—in other words, an increase of income amounting to $600,000, equal to the interest on the State debt.

In all steady continued draught, as in threshing, grinding, and other machinery, now so much in vogue, the excellence of the mule is most remarkable, and especially in his less liability to gall—an evil to which the horse is peculiarly subject, where his locomotion in harness is *circular*. On their value in service that consists of constant, steady hauling, an extract may here be made from some editorial remarks in an old volume of the American Farmer, then conducted by Mr. Skinner, now of Washington. Speaking of the decided preference given by the late Gen. Ridgely, of Hampton, to mules in the heavy hauling connected with his iron works, it is observed: "For some time the General indulged an old servant in keeping a single team of horses, but it was found that the mule teams performed their day's journey, hauling equal weight, sooner than the horses, by one hour; and the great value of the mules has been so well established, in the course of his ample experience, that they have superseded horses, with entire conviction of the great saving accomplished by the change. This information first derived from his manager, Mr. Green, was fully confirmed by the General himself."

Why, then, let it be repeated, in reference to these two animals, make fish of one and flesh of the other? Offering $76 in premiums for the horse, and $15 only for "jack, jenny and mules;" and that, too, under the authority and sanction of gentlemen who cannot be too much admired for their public spirit and honorable intentions; nor too closely imitated in their individual practice and general management.

As to the more general use of the mule in light harness for the road, the common impression is, that he can't be made to *travel fast enough*. Nobody likes rapid motion more than the writer of these crude, but well meant and respectful strictures; and he would take leave to inquire, who has given to this neglected hybrid a patient and fair trial, to see how much his speed may be improved? Let it be considered how long it takes to bring a crack trotter, such as Ripton or Confidence, to his best! Hiram Woodruff or Bill Wheeler, the American Chifneys among trotting jockeys, never think of taking a horse in hand, to train him for this pace, until after he reaches his sixth or seventh year; and they can hardly be said to get to their best work until they fall into their teens. Old Top Gallant performed his chef d'œuvres after he was twenty! When the mule has been in like manner taken up, and systematically trained for the trot, and it is found that he cannot be driven at the rate of eight miles an hour, it will be time enough to pronounce him impracticable in that pace; but the writer knows him to be master of that rate, for he has ridden with two others beside Gen. James Shelby, who drives nothing else in his private carriage, from Lexington out to his magnificent blue grass farm, eight miles, behind two mules of about 15 hands, within the hour, and without a touch of the whip; and learned from the General that he had driven a pair to the Blue-lick, a distance of forty miles, in six hours, stopping one hour on the way.

In lieu, then, of some of the premiums bestowed on breeding stock to give animals of slow draught, and on sucking colts, would it not be more politic to lend the countenance of the society to the rearing and more general adoption, for the roads as well as for the field, of a more economical and enduring power? Might not a premium be well offered, in the shape of a set of knitting needles in a silver case, or a butter cooler of ground glass, with a cow reposing on its silver lid, to the wife of the planter who shall accompany him to the cattle show, in a plain light carriage drawn by a pair of best broke mules? To the wife, because it is doubtful whether, without her consent, this great desideratum in rural economy ever can, or, perhaps we should add, ever ought to be achieved! Were it to be imagined that the fact would have any weight with our republican housewives, it might be added, that the medals struck in honor of Agrippina, a heroine whose life was adorned with the most noble virtues, bear on them the image of a mule; and a gentleman at my elbow reminds me that he has seen Charles the X setting out for his royal palace at Fontainbleau, 13 leagues from Paris, driving six splendid black Spanish mules of Andalusian blood!—But it would be a libel, of which I should never be guilty, to suppose that an American matron could be influenced by any motive so strong as her ambition to promote the independence of her husband, and to set to her friends and neighbors an example of economy and good sense.

Farmers' Cabinet.

BUTTER MAKING.

Messrs. Gaylord & Tucker—I observe in your last paper, that some lady is desirous of obtaining particular information in regard to the process of making and management of butter. For fear that those *actively* engaged in the employment may not take time to satisfy her inquiries, I have concluded to give her and her "neighbors" my own ideas on the subject, derived from past experience.

Some thirteen or fourteen years ago, with but little more knowledge of the matter than your correspondent professes to have, I undertook the charge of a small dairy. I found there was an English dairy woman in the neighborhood, whose butter was the criterion by which all other butter was judged, when submitted to the epicures in that article. With the aid of her friendly instructions, and such books on the subject as I could resort to, a satisfactory result was obtained.

The first requisite to the production of good butter is *good cows*. By good cows, I mean those that will give plenty of such milk as will yield a large quantity of good butter. It is a well known fact that cows running in the same pasture, or fed precisely alike, will afford butter varying much in quality. A poor cow is more injury to the dairy than she is worth, and should therefore be rejected. I have always observed that cows which gave the richest milk, generally have soft, velvet-like *yellow* skins. I will not say of what tint the *hair* should be, as I should not like to commit myself on the long vexed and important question of *color*.

Cows, to yield good butter, as every farmer and dairy woman knows, should have *good keeping*. Plenty of good succulent food, both in summer and winter.

The *Dairy House* should be cool and airy, commanding plenty of pure cold water, either by a running stream, or by pipes laid from a well; ice, too, is an excellent auxiliary. Wood or stone troughs, which can be kept full of water, are very good to set the pans of milk in.

Great care should be taken that every thing connected with the dairy should be managed with the most scrupulous *neatness*.

If milking is done but twice a day, the time should be divided as nearly equal as convenient. The milk should be carried to the place where the dairy work is done, immediately strained, and left a short time for the warm steam to pass off before it is carried into the dairy.

Of all the pans I have used, I much prefer the tin. They are lighter, less expensive in the end, and easier kept clean. Zinc is not fit to keep milk in at all, as a slight degree of acidity decomposes a certain portion of the zinc. From 24 to 48 hours is sufficient time for the milk to stand before skimming. I should much prefer that milk should never *sour* before the cream is taken off. Some persons think it highly important that cream should acquire a certain degree of acidity before churning, but I confidently affirm that the best butter I ever made, was from cream that was perfectly sweet when the churning was commenced. The remarks of a writer in a late number of the "Maine Farmer," so exactly coincide with my own views, that I will give them in his own language:

"Butter is an article which is very ready to receive a flavor from any gas, or from contact with other substances, unless it is entirely freed from every particle of its mucilage." He says further, that "the mottled or streaked appearance in butter, is owing to the coagulated lymp, coagulated from souring; it is indissoluble in water, and can never be worked out of the butter. Salt should not be added at the *commencement* of the first working, as it is known to every housewife that salt will curdle sour buttermilk, and should also be known that curd once formed in with butter, can never be worked out. They can work out the whey and leave the butter apparently dry, but the cause of the mischief is still left. Incipient decay has already commenced in the coagulum or curd, and will proceed, unless something can be applied that will put an entire stop to it."

The frequency of churning may be regulated according to the quantity of cream and state of the weather.* The best churn for a moderate sized dairy, that I have any knowledge of, is "Gault's Patent." It operates easily and effectually. It may be had of Ruggles, Nourse & Mason, Boston, and probably at other implement stores. In the largest size, from one to twenty five pounds of butter can be made at a time.

Experience has led me to deprecate the practice of *washing* butter when it can possibly be managed without. Butter that comes so soft as to require cold water to harden it, cannot by washing be made to keep sweet any length of time. When the butter is taken from the churn, and the buttermilk worked out, put in 1¼ oz. best salt to one pound of fresh butter; or if the buttermilk is not well worked out, more salt will be needed. Set it away in mass for 24 hours in a cool place, when every particle of moisture should be extracted, and the butter made into rolls or prints for use For this purpose a flat smooth board or marble slab is necessary; a flat surface preferable to a dish, as you can so much more easily get rid of the moisture from the butter. Some use a wooden slice or spatula to handle the butter with; this requires more strength, especially if the butter is hard, than is required by the use of the hand alone. To prepare the hands for working butter, rub them well with wet corn meal, then wash in water as hot as can be borne, plunge them in cold water for a moment, and you are ready to handle butter in the warmest weather without melting it, if it is done early in the morning, before the hands get heated by exercise.

Butter for keeping should be made when the weather is cool. To every pound of fresh butter, add 1¼ oz. best salt and ¼ oz. saltpetre, taking particular care to extract every particle of moisture, as on this mainly depends the future excellence of the article. Pack close in stone jars. Doubtless every one has observed when butter is not well worked, the watery particles diffused through it, destroying that waxy appearance so much prized by lovers of good butter.

Salt should never be used for butter without sifting; it is extremely disagreeable to encounter lumps of salt, either in spreading or eating, what should be such a luxury.

Winter butter can be made as good in color and consistence, as at any other season of the year. This assertion will perhaps appear strange

*In cold weather the cream should be brought to the fire some time before churning. I think about 65° Farenheit is about the right temperature.

to some of *my neighbors*, as the bad quality of the butter in our market has been a subject of continual complaint and inquiry during the past winter. To find one of the causes, no one need go far. Let him only ride 20 miles in any direction, during the severe winter just past, and he would have seen hundreds of these poor abused creatures, the cows, standing around, (not even permitted to enter,) the log barns which appear to have been made expressly for *free ventilation*, chewing the cud, not of "sweet and bitter fancy," but some old dry cornstalk, or perchance, if so fortunate as to have a saw mill in their vicinity, a nice strip of bark gnawed from a log that had lain in water till sour and half rotten, looking for all the world as if they could give their owner more tears than milk. This is no "fancy sketch"—and now need one ask why the butter is poor?

With good cows, well fed, and a place to raise the cream without freezing, there is no difficulty in the matter. If the natural richness of the milk does not impart sufficient color, take deep colored carrots, (the Altringham is best,) grate fine, pour boiling water on the pulp, and strain into the cream till sufficiently colored; so far from imparting a carroty taste, it gives additional sweetness and richness to the butter. Yolks of eggs beaten up, two to a gallon of cream, do very well. These are the only coloring materials I ever used.

I have extended this communication to a greater length than I intended, and if I have been led into prolixity, (which, by the way, I detest,) a desire to assist beginners, for whom I have written, must be my apology. Should any experienced dairy woman be in possession of important facts on this or any other subject, which are not familiar to all, I hope she will not withhold them from your readers. M. W. H.

Albany Cultivator.

EXPERIMENTS WITH SALT.

GENTLEMEN.—I with pleasure comply with your request, and give you the detail of my experiments in the use of salt as a manure. In the spring of 1838, we broke up six acres of sward land that had been mowed a number of years, intending to plant it to corn, but observed when ploughed that the ground was infested with worms– the yellow cut or wire worm, and black grubs. As we had mostly lost our corn crop the year previous by having the first planting almost entirely destroyed by the corn-worm above described, we expected a like calamity would follow the present year, unless some preventive could be used to destroy the worms; and, having frequently and unsuccessfully used all the recommended remedies to destroy the corn-worms, we were induced, at the suggestion of an English laborer, to try salt. After the ground was thoroughly harrowed, five bushels per acre was sown broadcast, leaving a strip of near half an acre on each side of the field, to satisfactorily test the experiment. The whole was then planted to corn and potatoes. The corn on the part no salt was sown was mostly eaten up by the worms, and was reploughed and planted to potatoes. The potatoes on the whole lot were a good crop, but decidedly better where the salt was applied. I regret that we did not ascertain by measurement the actual result. There was a very perceptible difference in the appearance of the vines during the whole summer. On the part where the salt was sown they grew larger and were of a darker green color, and continued green longer in the fall than the others. In the spring of 1839 we spread on a good coat of manure, and planted it all to corn, except about half an acre of the salted land, which was planted to Rohan potatoes. The Rohans were the best crop of potatoes I ever saw. Seed planted (two and a half bushels) produced over three hundred bushels. The largest potatoe weighed four and three fourth pounds. The corn was a heavy crop, but was not measured. The summer was very dry and hot; but the corn on the salted land did not appear to suffer at all from the drought, while the other was considerably injured. The salted land appeared always moist, and the growth of everything upon it was very rapid. We found great difficulty in keeping the weeds down. After three successive hoeings, we were obliged in August to give it a hand weeding. Spring of 1840, intended to have stocked the land down for meadow; but, thinking it too rich for oats, planted potatoes without manure. Crop good. The effects of the salt still very apparent. Adjudged to be one-third more potatoes where the land was salted.

Spring of 1841, sowed a part of the lot to oats—the remainder to potatoes and onions without manure. The onions were a great crop. The summer was very dry, but they did not suffer; while other crops in this neighborhood, on similar soils, were nearly destroyed by the drought. The oats were a heavy crop, and much lodged on the salted part. The clover grew well and produced a fine crop of fall seed. This I cannot account for, except by supposing that the salt kept the land moist, or attracted moisture from the atmosphere, as I know of no other piece of land in the town that was well seeded last year. It was almost an entire failure; and the most of the land stocked down last spring has been or will be ploughed up in the spring to be re-seeded.

We sowed salt the same spring on a part of our meadows. The grass was evidently improved, the result satisfactory, and we shall continue to use it on our meadows. I shall not at this time force upon your readers any opinions of mine respecting the manner in which salt operates beneficially upon vegetation or the soil. The following quotations from English authors, if you see fit to publish them, will show that the subject is not a new one; and perhaps your readers may glean some information from them.

In Europe much has been said and written to prove and to disprove the utility of salt as a manure. Without entering at all into their ideas of the *modus operandi*, we may judge from the effects of experiments. I may say, however, that it has been supposed beneficial in small quantities, by its tendency to promote putrefaction, and injurious in large proportions, because it then exerts its antiseptic powers. It has been supposed of benefit, by destroying snails, grubs, moles, &c. in the ground.

"It is observed by Dr. Darwin, that as it is a stimulus which possesses no nourishment, but may excite the vegetable absorbent vessels into greater action than usual, it may, in a certain quantity, increase their growth, by taking up more nourishment in a given time, and performing their circulation and secretions with greater energy. In a greater quantity, its stimulus may be so great as to act as an immediate poison on vegetables, and destroy the motions of the vessels by exhausting their irritability. The reports of experimenters on the use of salt as a manure have been as different as the soils on which their trials were made; owing, in some measure, to causes which can never be foreseen or controlled, and on which agricultural experiment so generally depends. In sandy soil, salt has been found to exert effects superior to eight out of ten of the best manures. A quantity of ground was prepared and divided into beds of forty yards in length by one in breadth. The beds were then sowed and manured by the following substances in the quantities mentioned:

"No. 1. No manure.
2. Salt, half a peck.
3. Lime, 1 bushel.
4. Soot, 1 peck.
5. Wood ashes, 2 pecks.
6. Saw-dust, 3 bushels.
7. Malt dust, 2 pecks.
8. Peat, 3 bushels.
9. Decayed leaves, 3 bushels.
10. Fresh dung, 3 bushels.
11. Chandler's graves, 9 lbs.

"With the exception of chandler's graves salt was decidedly the best of those used. On a trial of compounds, the combination of salt and soot was the best. The substances were mixed in the following order, and the same quantity of each employed as when used singly:

"No. 1. Salt and lime.
2. Salt and lime and sulphuric acid.
3. Salt, lime and peat.
4. Salt, lime and dung.
5. Salt, lime, gypsum and peat.
6. Salt and soot.
7. Salt and wood ashes.
8. Salt and saw dust.
9. Salt and marl dust.
10. Salt and peat.
11. Salt, peat and bone dust.
12. Salt and decayed leaves.
13. Salt and pearl ashes.
14. Salt and Chandler's graves.

"Perhaps this superiority may be accounted for by the quality of saline substances to attract moisture from the air; for those beds where salt had been used were visibly and palpably moister than the rest, even for weeks after the salt had been applied; and the appearance continued until rain fell, when of course the distinction ceased. In several instances the crop of the land failed altogether, except on the part where the salt was applied."

In Hindostan and China, all the land on the coast is regularly treated with sea-water; and they depend solely on this management for the increase and goodness of their rice crops. In Poland, salt is extensively used in the tillage of the land.

Many valuable communications on the use of salt as a manure have been made to the British board of agriculture. I may be allowed to mention two further experiments made on this subject.

To show the effects and advantages of salt properly applied to vegetables, the gardener of Lord R. Manners made the following experiment, in an extremely dry summer, upon a bare piece of pasture land out of which the cattle had been taken for want of grass. He marked off four places, each of which was watered for nine successive nights in the following manner: the first with one gallon of spring water; the second with one gallon of the same water, containing one ounce of common salt; the third with the same quantity of water and two ounces of salt; and the fourth with the same quantity of water and three ounces of salt, which gave the following effects:

The grass in the second place grew more abundant and of a darker green than in the first; in the third place it grew only by spots; for part of it was killed where the greatest quantity of water fell; and the fourth was quite killed, for a greater compass than the third; by which it appears that an ounce of salt in a gallon of water had a better effect than the water alone; and that three ounces of salt mixed in a gallon of water was more than the grass could immediately receive, but the fourth place, in the ensuing spring was the most fertile of them all.

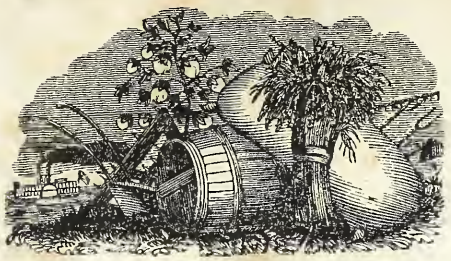
The other experiment I shall notice is related by Dr. Holland, well known by his agricultural survey of Cheshire.

"After draining a piece of sour rushy ground about the middle of October, he ordered some refuse salt to be spread upon a part of the land at the rate of eight bushels to the acre, and in another part sixteen bushels. In a short time vegetation disappeared totally; and during the month of April following not a blade of grass was to be seen. In the latter end of the month of May a most flourishing crop of rich grass made its appearance on that part where the eight bushels had been laid. In the month of July the other portion produced a still stronger crop. The cattle were remarkably fond of it; and during the whole of the ensuing winter, (which is ten or twelve years since,) and to this day, the land retained and yet exhibits a superior verdure to the neighboring closes."

JOHN C. MATHER.

Schaghticoke, Feb. 8, 1843.

Alaany Cultivator.



WEDNESDAY, JULY 19, 1843.

BACK NUMBERS.—All new subscribers to the "Southern Cultivator" can be supplied with the back numbers.

In connection with this paragraph, we trust our patrons and the friends of a Southern agricultural paper, will pardon us for *again* invoking their aid in extending our circulation. We are pioneers in this work in Georgia, and although we commenced under the most unfavorable auspices, we are gratified to perceive that our efforts are daily exciting increased interest on this vitally important subject, and we feel grateful to our numerous friends for the countenance and support they have extended. Much however as they have done, there remains much more to be done, and we therefore invoke the aid of our friends in still further extending our circulation. Let them make an earnest and zealous effort to have it read by every planter—in short, let every subscriber take it upon himself to get one other subscriber, and he another, and both the good which we desire to accomplish will be attained, while we shall be abundantly rewarded for our efforts in this important enterprise. We therefore ask every man who reads this paragraph, to make an earnest effort to get us *one* subscriber, and as many more as he pleases.

TO READERS AND CORRESPONDENTS.

MR. CUNNINGHAM'S PROPOSITION.—To such as desire to embark in agricultural experiments for the improvement of our soils and the system now generally adopted by our planters, the proposition submitted by Mr. Cunningham in his letter, which will be found on our first page, affords a fine opportunity. We sincerely hope he may find such a purchaser as he desires, and that the future numbers of this paper may be enriched with the result of their experiments, and the country consequently benefited. It is, indeed, a laudable enterprise, and if the same spirit could be infused into many of our planters who live neighbors, much good would be accomplished, both to the cause of agriculture and the general prosperity of the country. Let our planters therefore look to this matter, and let a spirit be generally excited among them, either by means of Agricultural Societies, or by a rivalry between immediate neighbors, and the good effects will be apparent at a very early day.

SMUT IN WHEAT—BOMMER'S SYSTEM.—We acknowledge, with much pleasure, the communication of "H." of Athens, which will be found in this number, on these two, to the planter, most important and interesting subjects, and we commend it to their consideration. The experiment with the wheat is certainly very satisfactory, and would seem to be almost conclusive; certainly so for this season in that particular location, however it might be operated on in other locations in other seasons. It is an experiment however easily made, and should engage, as we hope it will, the attention of every planter in the country.

We commend also to the reader's attention the remarks of "H." on the subject of Bommer's method of making manure, containing as it does a most important piece of information to all who may desire to test the value of this system, which is now exciting so much and such general interest.

We are wholy unable to answer the enquiry of "H." as to his Berkshire sow. May she not be too fat?

SUGAR BOILER.—Mr. A. GREENE has kindly furnished us with a communication giving a plan for a cheap boiler, which he has tested, and to which we take pleasure in calling the reader's attention. If they should not desire to use it in experiments for boiling corn stalks, it will be found, as Mr. G. truly remarks, to answer many valuable purposes on a farm.

The communications of Mr. FARRAR, and "A LOVER OF GOOD HAM," are well worthy of consideration, and if any of our readers can answer the enquiries of Mr. F., we would thank them to make our paper the medium of communication, as they are subjects in which all planters are to a greater or less degree interested.

FINE WHEAT.—Accompanying the subjoined note, was a specimen of as handsome wheat as we have ever seen grown in any part of the Union. We should be glad if the writer will furnish, for our columns, an account of the character of the soil, its preparation, time of sowing, reaping, and, last though not least, the yield—all which will doubtless be highly interesting to our readers.

GREEN COUNTY, July 8, 1843.

Messrs. JONES—Having an opportunity, I forward you a sample of wheat which is of my own culture, and I think you will readily admit it to be a fine grain, and if any wheat is worth fifty cents a head this is the kind. The wheat crop, which is valuable, has been unusually productive the present year, and though I sowed but one gallon lacking a pint, I am willing to show it against any other wheat (of this State,) either in quantity or quality.

In haste, yours, &c.

A PLANTER.

AGRICULTURAL SOCIETY FORMED.

We notice with much pleasure from the Madison Miscellany, that an Agricultural Society has been formed in Morgan county—a sign which we hail with much pleasure, as the dawn of a new era in the prosperity of Morgan county. There is no county in the State where the benefits of an improved system of agriculture will be more quickly perceived, or more lasting in its effects, than Morgan.

Scraped horse radish made into a syrup, is said to be an excellent remedy for hoarseness.

UTILITY OF LOCUSTS, CROWS AND BLACK-BIRDS.

The appearance of Locusts in many parts of the Middle States this season, in great numbers, has elicited the following communication from Gideon B. Smith, which we clip from the Baltimore Patriot.

"Mr. EDITOR—You have, no doubt, as well as many of your readers, heard much of the injury done by locusts wherever they have appeared. Some have even attributed to them the death of human beings, (all romance, by the bye, as they have no means by which they can cause death or any personal injury to human beings;) others say they kill the trees and shrubbery, &c. &c., but I have not seen one item of credit for the good they do; and that the account may be fairly stated, that a just balance may be struck, permit me to give you the other side of the ledger:—1st. The locust saves the farmer a vast amount of corn, &c. as food for pig and poultry—for, during the locust season, no pig in pasture, or turkey or chicken will touch corn, or any other food than the delicious locust. 2d. During the locust season, the crow and the black bird will not pull up the corn. It may not be known to your readers, but it is a fact, that these birds only pull up the corn for the purpose of getting at the grub worm, who would have cut it (the corn) at any rate, even though the crow or black bird had not touched it. Well, the crow and black bird being supplied with abundance of the papa or grub of the locust, as they emerge from the ground, will not touch the corn. True, the grub worm is left to perform his avocation, and as the crow and black bird have not lessened their numbers this year, the farmers will have to look out next year for terrible havoc from this enemy of corn, wherever the locust have appeared this year. These facts ought to prevent farmers from destroying crows and black birds. They only seek the grub or cut worm, and if they do pull up a few blades of corn, they do it only to get at the worm which would have cut them down at all events."

CULTIVATE SMALL FARMS.

The Wilmington (N. C.) Chronicle has the following very sensible remarks on this subject, which we commend to the attention of our planters.

There has lately been considerable emigration from New York to Virginia, mostly of agriculturists, who find their account in selling their own well ordered fields for a high price and buying Virginia lands which have become cheap solely from bad husbandry. Many of the farmers of Dutchess county, New York, have sold their farms for one hundred dollars per acre, and purchased farms in Virginia for three or four dollars per acre, which they expect to make in a short time as valuable as the lands they sold.

'One mode,' says the Baltimore American, 'by which the Northern farmers improve the wornout lands in Virginia is to make small farms. The system of large plantations in the Southern States has resulted in deteriorating whole tracts and districts of country. Bad tillage is an almost inevitable consequence of such a system. The farmer or planter who endeavors to make up for the loss of fertility in his lands by increasing the number of his acres, only extends the evil which he would escape from, and adds to the amount of his labor without securing a corresponding return of profit.'

There are truths here laid down which Southern farmers do not give proper heed to. When will they learn to cultivate less land and cultivate it well? The system now generally pursued is about as wise as would be that of a schoolmaster who should attempt to teach one hundred boys himself, or the scholar who should undertake to learn every thing. We believe our farmers begin to see the evil. The sooner they set about correcting it the better for themselves and the country.

GESTATION IN ANIMALS.—In a recent German publication of great research and accuracy, the period of gestation and incubation in nearly all the domesticated animals is given, from which we select a few.

Animal.	Shortest per'd.	Mean per'd.	Longest per'd.
Mare,	322 days,	347 days,	419 days.
Cow,	240 "	283 "	321 "
Sow,	109 "	115 "	143 "
Ewe,	146 "	154 "	161 "

According to the report of M. Teissier, of Paris, who had charge of the experimental farm established by the government of France, of 582 mares which received the male but once, the shortest period was 287 days, and the longest 419, making the extraordinary difference of 132 days.

The most satisfactory experiment with cows on record, is that made by order of Lord Spencer, in which the gestation in no less than 764 cows was carefully noted. From this it appears that the shortest period in which a live calf was produced was 220 days, but no calf produced at a less period than 242 days could be raised.—The longest period of gestation was 313 days. From Lord Spencer's tables, as given in the Journal of the Royal Agricultural Society, it appears that 314 cows calved before the 284th day, and 310 calved after the 285th day; so that the probable period of jestation in the cow must be fixed at 284 or 285 days.

LAND IN SIGHT.—We believe that there has not been a time, since the general tumble down of prices, and the consequent agricultural distress, when the prospect of relief was so fair as at present. Farmers have been gradually, but certainly, surmounting their difficulties, and already they begin to breathe more freely. Driven to retrenchment and economy, what at first seemed an evil, is found to have been a positive good to all classes of society; and if the severe lessons the community have been taught, have their proper effect, we shall find many days of prosperity are yet before us. Debts heedlessly contracted, and without any rational expectations of meeting them, were the great cause of our personal or individual difficulties. The farmer has been slowly working his way out of these; and now better prices for his produce is coming to his aid, to complete the work. We would not intimate that the prices of 1837 are to be expected. They ought not to be desired, as they are inconsistent with a healthy and safe condition of things; but every thing indicates a gradual restoration of confidence, and prices that will be remunerating. We now, as a nation, sell more than we buy; our manufactories are getting into successful operation; new markets are opening for our agricultural products; specie, instead of gewgaws, is flowing in upon us; money is becoming plenty for those who have any thing to purchase it with; and there is a general feeling that the "dark day" is at last passed. We have only to avoid the errors of the past; to see our way clear before us; and as a nation or as individuals, to purchase nothing we do not need, and to pay down for what we do purchase, and we may reasonably hope, that if we do not become rich, we shall not be obliged to incur the disgrace of repudiation.—*Al. Cult.*

THE WORKING MECHANIC.—We cannot say too much in behalf of the working mechanic, who constantly is striving to make himself known, not only in becoming a proficient in his business, but who is every day raising himself to eminence by the course of his habits. A young man who has nothing to depend upon but his character and the labor of his own hands, for his elevation in the world, can, notwithstanding, arrive to the highest pitch of greatness, to the most elevated ranks in the community, and not unfrequently to the highest grade of national honor. And while we remark thus, we are happy to place to the credit of the mechanic, the fact that he ranks with that class of citizens who are the most likely, with judicious management, to become the welcome possessors of American popularity in every grade and form it assumes. Roger Shermam was once seated upon the shoemaker's bench, with his lap-stone upon his knees, and it was there, doubtless, that he first ruminated upon his first adventures. Are you a young mechanic? Determine, at once, to trace his history, and resolve to make yourself a greater man even than Roger Sherman.—*Farm. and Mech.*

FACTS FOR COTTON PLANTERS OF GEORGIA.—Will not the planters of Georgia encourage the use of bagging made from Cotton? Listen to these facts and decide for yourselves.

The cotton crop of 1839, by the published statistics, was from Georgia 163,000,000 pounds. Averaging the bag at 400 pounds, this made the crop 407,500 bags; this required, at 5 yards per bag, 2,037,500 yards, which at 20 cents per yard is $407,500. If the bagging made from cotton be used in place of *hemp*, every dollar of this money is retained in the State; whereas with the use of hemp, every dollar is carried out of it, except the small items of transportations and commissions. For safety sake we may say that $300,000 of this amount is taken away from the State entirely.

Again, to manufacture this bagging, each yard requires two pounds of raw cotton, which makes an amount of 4,077,000 pounds. Now if we use *hemp bagging*, we add just this amount annually to the *supply* from the crop for manufacturing purposes, and it tends to diminish the demand just so much. Suppose we convert it into bagging, we furnish a new *demand* for that amount; in other words, we withdraw from market that amount, diminish that portion of the supply—reduce the crop so much, which at 400 pounds per bag, is 10,192 bags, and thereby *increase* so much the *demand* for our cotton. In addition to the large amount of cotton thus consumed, there is also a considerable quantity converted into rope and twine. Will not the farmers study these facts and take the hint?—Read this article again and see how you like my suggestions. May not we reduce the price of bagging to 16 or 17 cents, if we encourage entirely our own manufactures in making it, and save commissions, profits and freights now made by commission merchants, and ships and steamboat owners. PUTNAM.

Southern Recorder.

LABOR.—Whence originated the idea that it was derogatory to a lady's dignity, or a blot upon female character, to labor? and who was the first to say, sneeringly, "Oh, she works for a living?" Surely, such ideas and expressions ought not to grow on republican soil. The time has been, when ladies of the first rank were accustomed to busy themselves in domestic employment. Homer tells us of princess who used to draw water from the springs, and wash with their own hands the finest of the linen of their own respective families. The famous Lucretia used to spin in the midst of her attendants; and the wife of Ulysses, after the seige of Troy, employed herself in weaving until her husband returned to Ithaca. And in later times, the wife of George III. of England, has been represented in hemming pocket handkerchiefs, while her daughter Mary sat in a corner darning stockings. Few American fortunes will support a woman who is above the calls of her family; and a man of sense, in choosing a companion to jog with him through all the up-hills of life, would sooner choose one who had to work for a living, than one who thought it beneath her to soil her pretty hands with manual labor although she possessed her thousands.—To be able to earn one's living by laboring with her own hands, should be reckoned among female accomplishments; and I hope the time is not far distant when none of my country women will be ashamed to have it known that they are better versed in usefulness, than they are in mental accomplishments.—*Selected.*

TO CURE A SNAKE BITE.—Mr. R. who has lived many years in the South where rattlesnakes have ever been exceedingly troublesome, causing frequent and sudden deaths, reports the following as a sovereign remedy for the bite: Put about a tea spoon full of the *Nitrate of Potash*, (*Saltpetre*) into warm milk, or when this is not convenient, into water, and after it is properly dissolved, let the patient drink it and relief will soon follow. This is perfectly *Homoepathic*, or in a little more learned style, *similia similibus curantur*, or in plainer style, "a hair of the dog will cure the bite.—*Tenn. Ag.*

HORN DISTEMPER.—A "Practical Farmer" in the Boston Cultivator, while he admits that the application of spirits of turpentine is good, asserts the use of hot brimstone as still better for the horn-ail. He puts one spoonful, boiling hot, into the cavity just between the horns.

GOOD FARMING.—"Sambo, is your master a good farmer?" "O yes, massa fuss rate farmer; he make two crops in one year." "How is that Sambo." "Why, he sell all his hay in de fall and make money once; den in de spring he sell de hides of de cattle dat die for want of de hay, and make money twice."

AUGUSTA MARKET.

TUESDAY P. M., July 18.

Cotton—Since our notice of the market in our report of the 4th, the business amongst our cotton dealers has been to a very limited extent.—The receipts have been very trifling and the stock on hand is very much reduced. We give the following as the present selling rates, viz:—inferior to ordinary 4½ @ 5, middling to middling fair 5¼ @ 6, fair to good fair and choice 6¼ @ 6¾ cents.

Money—Checks on New York, Philadelphia and Charleston cannot be had at less rate than ¼ ℔ cent premium. Central Bank notes continue to improve, and sales have been made as low as 7 ℔ cent discount. State 6 ℔ cent Bonds would bring 75 cents, and 8 ℔ cent Bonds 92 @ 93 cents.

CONTENTS OF THIS NUMBER.

	PAGE.
A Proposition	113
Cheap Sugar Boiler; Cultivation of Corn	114
Importance of Hogs	115
To prevent Smut in Wheat; Bommer's Manure; Cotton Bags; Mules	116
Butter Making	117
Experiments with Salt	118
To Readers and Corrospondents; Morgan County Agricultural Society; Utility of Locusts, &c; Cultivate Small Farms	119
Gestation in Animals; Land in sight; the Working Mechanic; Facts for the Cotton Planters of Geergia; Labor; to Cure a Snake Bite; Horn Distemper; Good Farming	120

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COMMUNICATIONS.

UNION POINT, GREENE CO., GA., July 28th, 1843.

Messrs. EDITORS—I have noticed in the 15th No. of the Southern Cultivator, an article over the signature of "A Lover of Good Ham," setting forth the necessity of our raising our own bacon; and though I agree with him in the first and second instances, viz: that we *should* raise our own pork, and that the Georgia public are grievously imposed upon by drovers in the article of "Berkshires," &c."—still I cannot agree with him as to the fact, that we have no pure blooded Berkshires in Georgia. It is true that the country is flooded with a spurious breed, *purporting* to be Berkshires, which are in fact but a remote *cross* of that breed. I fully concur with the writer of that article in censuring the cupidity of the western drivers in thus palming a mixed breed upon their neighbors, and in deprecating the credulity of the too unsuspecting Georgians in suffering themselves to be thus imposed upon. But there are, nevertheless, among us some of the stock as pure as any to be found in Berkshire county, England. Col. John Bonner of White Plains, in this county, has a choice lot of about twenty or twenty-five breeding sows, and three boars, of the "simon pures." I have had the pleasure of seeing his stock once or twice, and can assure "A Lover of Good Ham" that there are animals among them whose hams, if we may judge from their beautiful proportions, would tempt his appetite even if he was unusually fastideous. But as he may want proof, I will give the reasons why I believe them to be the pure blooded Berkshires: First, they excel any hog I ever saw in beauty and symmetry of form, tractable disposition, and capability of fattening; second, they have all the marks attributed to the pure bloods by breeders both in this country and England; and thirdly, *because several of them came from Berkshire county, England;* and of those not imported, he has full and authenticated pedigrees, running back to the imported stock, from such men as C. N. Bement, A. B. Allen, and Messrs. A. & G. Brentnall; men whose names are a sufficient guarantee for the truth of their statements. These facts I received from Col. Bonner himself, and I presume he will substantiate them if called upon. I have heard of other lots of Berkshires in this and one of the adjacent counties, but these I have *seen*, and I am fully convinced that if there are any pure blooded Berkshires in the United States these are.

But I am making this communication longer than I intended. My design was simply to convince your correspondent that he was mistaken in the fact assumed, viz: that all the hogs purporting to be Berkshires, in Georgia, were a mixed breed. By the way, Messrs. Editors, would you not be conferring a favor upon the farming community generally, if you would request of Col. B. to give to the public, through the medium of your paper, the result of his experience in rearing Berkshires; his manner of rearing, fattening them, &c.; their adaptedness to our climate; together with such other facts concerning them as may make their merits more extensively appreciated? I am clearly of the opinion that all who will try them, (I mean the pure bloods,) will be convinced that it is not "a multicaulis speculation."

Truly yours, J. M. G.

THE IMPROVED CULTURE OF COTTON.

Messrs. EDITORS—In looking over the 2d No. of your very neat and most excellent Southern Cultivator, a few days since, I observed an extract from a paper of mine, "upon the Improved Culture of Cotton," taken from the Albany Cultivator, of February last. At your permission, gentlemen, I avail myself of the earliest leisure moment from the duties of my profession, to correct a most erroneous impression, which I conceive that extract, in its present isolated position, is calculated to make upon the minds of your numerous readers. That extract, embracing as it does simply the modus operandi of the system of culture by which my cotton was grown the last year, which, together with the caption—"*How to make a large Cotton Crop*"—placed this improvement, and my object in the time, labor and trouble sacrificed in its accomplishment, in rather a ridiculous light before the sober and reflecting planter. Such planters, and their influence is beginning to be felt in our country, are disposed to look upon and hail the appearance of the Southern Cultivator, as the harbinger of better days than those of the *multicaulis, multibolis, and fancy stock humbug*, the pestiferous influence of which has swept over our land like an Egyptian blight. Such men are the patrons of light and knowledge in agriculture, they reason from cause to effect; give them the truth, the simple and whole truth, with all the conditions of any improvement, and they act upon the impulse of a wise and proper reflection. Their primary object is improvement, their views are liberal, and their motives patriotic. Thus in the exercise of a purely unsophisticated judgment, in determining the merits of a great national agricultural improvement, however brilliant the success in the end accomplished. They coolly and dispassionately take up the premises, and if they discover there a deep laid and broad basis, sufficiently immoveable to sustain the superstructure, though infinitely beyond the ken of even previous imagination, they will accord to it a most cordial approval. There is a presumptive evidence, at least, which the mind of the honest and generous hearted planter recognizes in the fact, that science is the governing principle here, the improvements of which upon the destiny of man, within the last half century, have accomplished more than all the *brute force* of the previous fifty centuries of the world's age.

Do not suppose me, gentlemen, ambitious to secure the precipitate credulity of a single planter, in the advantages of this improvement; all that is asked for it is, an *attentive* and *patient hearing* and a *fair trial:* to such planter reward is certain, and to such only. In collecting and grouping together these leading principles in the science of agriculture, so prominently and admirably held forth by Davy, Liebig, and the Cultivator, (Albany,) and in adjusting them to the economy and great ability of the cotton plant, let me assure you, gentlemen, I have been actuated by a higher and a holier motive than the sordid object, in the abstract, of "a large cotton crop!" This is certainly the result, and, in part, the planter's reward, which, however, I have ever regarded as the least interesting feature of the improvement. In its proper place, in my first paper, you may observe, that my object in these experiments has not been to augment the crop of cotton, either per hand or per the aggregate, already too great, but by an entirely new and improved system of culture, predicated upon the principles of a scientific and enlightened policy, to curtail the immense capital engaged, under the destructive system of the country, in its production, to one-third its present enormity. If I shall succeed in demonstrating this fact, my determined object, which my experiments the past season have more than realised, I shall have accomplished yet another step in this interesting improvement, and that not the most important.

Again, gentlemen, you will not fail to observe, nor will the merest tyro in the profession of agriculture, that the land thus treated, (as per detailed) after yielding the handsome reward to the industry, care and perseverance of the planter, of some 3000 to 5000 pounds of a superior staple per acre, will be improved by the operation in the ratio of some two or three hundred per cent upon its natural state. The soil thus

improved, the primary object of the system will be found the next year, superiorly adapted to the culture of corn; requiring simply the surplus cotton seed of the previous crop, with the same treatment otherwise, to insure a yield of 50 to 75 bushels per acre. The treatment of the succeeding two years, first in small grain, giving an equally large yield, and last, which completes the cyclus of rotation, to lie one season in the state of fallow, will each add greatly to the improvement of the soil. I have neither time nor space at present to enter more minutely into this most interesting branch of the subject, which sketch, however, will serve to illustrate my object in the institution of these experiments.

A short reply to your editorial commendation and I have done. It has not appeared surprising to me, gentlemen, that the result of my experiments should "seem extravagant" to you in your office, when I have seen planters, men too of experience and extended observation, from Baker county in your own State, and others from the rich alluvial valleys of the Chattahoochee, and the great Mississippi, while standing in the midst of my cotton, to express even greater reluctance in according their assent, though looking upon the well proportioned weed, yielding its thousands per acre. An optic entertainment this, infinitely more interesting than the rapids of Harper's Ferry, or their counterpart, Jefferson's Rock, which that great man declared to be worth a voyage across the Atlantic. N. B. Cloud, M. D.

Alabama, July 15, 1843.

P. S. You will probably be told, gentlemen, by some ad captandum planters, whose speculative temperaments have induced them to grasp at the "golden fleece" with impure hands, "that they have tried this system and it will not answer." Ask such men if they have complied with the conditions, and believe them not. I will here, in a very few words, inform you, and the friends of improvement, that I have cotton now growing upon pine land, a fair experiment, the present very unfavorable season, treated precisely to the letter as detailed in No. 2, that was topped on the 10th inst. six feet high, and so entirely interlocked the wide way as to forbid the further use of the horse hoe or sweep.—Upon a single stalk of this cotton, and it not better than others around it, I counted on the same day, (10th,) upwards of 300 bolls, blooms and squares—they literally hang upon the limbs in tresses—and this cotton has yet 75 days to mature. Think you the same success may not be attained in Carolina and Georgia? I tell you that the ingenuity and industry of the American farmer's sons, attained by the stern maxim of Roman perseverance, 'Nil desperandum, possent quia passe videntue," may, under this system, grow the same cotton and corn upon the poor, piney barrens of Edgefield and Richmond.

If there is a man who may eat his bread at peace with God and man, it is that man who has brought that bread out of the earth by his own honest industry. It is cankered by no fraud—it is wet by no tear—it is stained by no blood.

SMUT IN WHEAT.

Stanfordsville, Putnam Co., July 28, 1843.

Messrs. Editors—Your paper of the 19th inst. has just come to hand, in which I find a communication from your correspondent "H." of Athens, giving some account of the benefits resulting from soaking seed wheat in a solution of bluestone or strong brine, and rolled in slacked lime, to which I wish to add my experience. And I will here state, that the benefits I have enjoyed by soaking my seed wheat in a solution of bluestone have been derived from reading agricultural papers—my advantage from this one piece of information has been worth more to me than all the money I have ever paid for agricultural papers.

Year before last I soaked 15 bushels of my seed wheat in a solution of bluestone, and sowed it in a field as far as it would go; there being 6 or 8 acres of the field left, which were sown with the same kind of wheat, the land in about the same order, and the wheat equally as well cleaned, but had not been soaked. The result was, the wheat that was soaked was of good quality and clear from blast or smut; that part of the field sowed with the unsoaked wheat, had a considerable quantity of smut in it. I soaked my seed wheat again last year in the same kind of solution, and have a nice crop of wheat with not a grain of smut in it that I have seen. I did not roll my wheat after soaking in lime or any thing else, and several of my neighbors tried the experiment of soaking their seed wheat last year with entire success.

The quantity of bluestone used in this settlement is one pound to every five bushels wheat, and the plan has been to put the wheat in soak in the evening for the next day's sowing; reserving the water to put the next wheat in, and then add enough more water with its proportion of bluestone to cover the wheat. The best plan is to dissolve the bluestone in a small quantity of hot water, as it is hard to dissolve in cold water. If the weather should become wet and any of the soaked wheat not sowed, it may be spread in an out house without any injury till the ground gets in the right order for sowing again. I soaked some of my seed wheat last year 6 or 8 days before it was sowed. I have no doubt but rolling the wheat in lime after it is soaked is an advantage, especially when the seed wheat is not as thoroughly ripe as it should be, or the ground the least out of order, and this when it is too wet to be perfectly friable.

I would advise all wheat growers who are troubled with smut, to try this experiment or a similar one. The cost of a trial is but trifling, as bluestone costs only 20 to 25 cents per pound.

In concluding this communication, I do most sincerely advise all wheat growers to have their seed wheat thoroughly ripe, and then effectually cleaned with a good seive, (after being fanned,) letting all the small grains pass through the seive, and take all the light grains that rise on the top off with the hand. Should there be any cockel in the wheat, by using a seive of the right description, it will in a few years be entirely eradicated.

I am, sirs, yours respectfully,
John Farrar.

Wilkes County, Ga., July 17, 1843.

Messrs. Jones—I again address myself to my brother farmers, and would like, if I could call their attention to several things of importance to them which, I fear, are often neglected.

1st. The importance of taking better care of their stock. I think after the severe lesson they learned last winter, they will see the necessity of providing more and better provisions for their stock than has heretofore been customary. Every farmer should have comfortable shelters for all kinds of stock, and provender enough to keep them not only alive but in good order.—Shelters for cattle should face the south, and be boarded up on the ends and on the north; the roof should slant to the north, so that the cattle may get the benefit of the sun. There should be a ditch cut large enough for the rain to run off. Salt should always be kept in reach of the cattle, so that they can get at it as often as they want. A good mixture for cows is, half salt and half ashes.

2d. Farmers should make all the manure they can. They should save everything—soapsuds, ashes, chamber ley, dish-water, dead animals, leaves, hair, and every thing that can possibly be made into manure. It should be applied to the land every year if possible, and it is better to manure one acre well, than five poorly and sparingly.

3d. *The Cultivation of Corn.*—I should like to see a discussion in your paper in regard to this subject. I think the old system of culture may be greatly improved, as I am of opinion it should not be plowed deep, if at all, after it becomes breast high. Plowing at this time cuts the roots, thus forcing the plant to form new ones, and of course checking the growth. I hope your subscribers will give their opinions on this subject, as it is one which calls for discussion, and as almost every one has a different way of cultivating this plant. I will close by saying that *manure* is the sheet anchor of the farmer.

I remain your friend, A. O.

Spaying Swine—I have seen several directions given for spaying swine; none however, I think, superior to mine, which is as follows: I have a crooked stick, in the form of the arm when half bent, about 18 inches long; to each end I attach a string, doubled, about 8 or 10 inches long, which I put in a noose over the hind legs, just above the hocks; hang them up head downward; tie the mouth to prevent squealing; let a boy stand at their back and hold the fore legs. I then with a sharp knife split the belly just between the hind four teats, sufficiently to insert two or three fingers of the left hand, draw out the pride, and cut it off with the knife in the right hand; then with a large crooked needle and waxed thread, sow up the wound in the following manner: stick the needle through from outside to inside, then bring out the needle on the other side of the wound, from inside to outside; cut off the thread sufficiently long to tie; repeat the same so as to make three stitches; then tie them, being careful not to draw the stitches too tight, and the work is done. I believe I can spay as many in a given length of time and with as little loss, as any man can any other way. John M. Johnson.

Hannibal, Mo., May 25, 1843.

Albany Cultivator.

Laziness travels slow and poverty thumps his heels.

FINE WOOL SHEEP.

Office of the "American Agriculturist," July 13, 1843.

To the Editors of the Spirit of the Times:

Dear Sir:—As you have expressed an intention of copying from our July No., in the "Spirit," the article on '*Fine Wool Sheep*," I desire to add a paragraph to it, showing the additional value it would be to the country to adopt the superior breed in question, in the hurry of writing, was forgotten at the time of publication. It was this:

Out of the twenty millions of sheep which are kept in the United States, I supposed eleven millions were shorn, producing 2¼ lbs. per head, making 24,750,000 lbs. of wool per annum. Now, by breeding the finer kinds of sheep, not only would the *value* of this large amount of wool be increased 9 cents per lb., making a gain to the country of $2,227,500, but the *quantity* also would be increased at least one pound per head, which reckoning the price at 30 cents only per pound (it is actually worth nearer 40 cents, low as wool now is,) would make another item of gain to the farmers, annually, of $3,300,000! Thus, by improving the *quality*, and at the same time adding to the *quantity*, the value of the wool then produced in the United States, on the *same food*, would be $5,527,000, an increase of more than 100 per cent; and this is but one among the many benefits proposed to the country, by adopting an improved stock, and an improved system of husbandry.

A. B. Allen.

—

FINE WOOL SHEEP.

Rambouillet Merinos.—Agricultural products of all kinds being so very low throughout the Union, it has become quite a desideratum on the part of the farmer, to know to what objects he can turn his attention, with the best prospect of realizing the surest and greatest profit from his land. We have thought, notwithstanding its unprecedented low price, that the raising of a superior quality of fine wool, especially on the hilly lands of the south and west, was now, and would continue to be, one of the safest and most lucrative branches of husbandry. We have accordingly so expressed ourselves from time to time in the pages of our journal, and we hope that our readers will not be impatient, if we continue to advert occasionally to this very important subject.

By the census of 1840, we see that there were, in round numbers, twenty millions of sheep in the United States. On account of the prevailing low price of wool and mutton for the past three years, it is generally supposed that there has been no increase among the flocks of the country, and that they are now about the same number as in 1840. As in this number, lambs as well as grown sheep are included, it will be fair to suppose that but little over one half, or say eleven millions, are shorn. The average product of fleece in these, we think we may be safe in estimating at 2¼ lbs., which would make 24,750,000 pounds of wool per annum. The average value of this is probably 21 cents per pound, which would amount to $5,287,500.—Now by producing a superior quality of wool, its value may be enhanced full nine cents per pound, which would be adding to the income of our farmers, no less a sum annually than $2,227,500, which in these times of pecuniary distress, would be felt as a very desirable and convenient increase to the earnings of agricultural labor.

Where a mild climate prevails, there is no doubt but that the increase of a flock after all the fixtures are prepared for its accommodations, will pay the expenses of keep and attention, and that the wool shorn from it will be clear gain. Sheep also are the best renovators of the soil; that is, by pasturing them upon poor or worn out lands, they will restore them to fertility sooner than any other kinds of stock: it therefore behooves the farmer and planter to consider, with these double objects before them, viz: the profits of agriculture and the improvement of the soil, whether they can do better as one branch of their business, than to keep 100 to 1000 sheep, according to the situation and the extent of their landed property.

Mutton being but a secondary, and wool the paramount object with the American farmer, the best animals to start with, or make improvements on those already on hand, are undoubtedly the Spanish Merino. And here we have to lament the great deterioration in blood and breeding, of those hardy and inestimably valuable flocks which were imported direct from Spain by Col. Humphrey and others, from the years 1808 and 1811. These had scarcely overcome prejudice, and got well planted among us, than our countrymen, true to their character, and despising pedigree and distinct breeds, and neither knowing nor caring for their value, and seized with the conceit that they could improve them by crossing, not only foolishly commenced mixing up these importations by coupling them together in all sorts of ways, thus making, to use a Spanish expression, a complete "olla podrida" (hodge podge mess) of the breeds, but in addition to this, as if it were not bad enough already, they must needs add by way of still further and more "scientific improvement," crosses of the miserable culls and offscourings of the open-fleeced Saxon flocks, imported by a band of mere mercantile speculators, in such numbers from the years 1824 and on.* But thanks to the good constitution, strength and fixed thorough breeding of the original Spanish Merinos, let the improvers do their worst, they could not wholly destroy them; and there are still large and valuable flocks scattered over the country, from which good ewes may be selected at a small cost, with which those disposed to go judiciously into the rearing of fine wool, may commence with the certainty of starting as near right as circumstances and a prudent economical outlay of capital will permit, and when with the use of pure breed, unadulterated Merino bucks, they may go on in the broad road of improvement, and be annually increasing the value of their flocks, raising the standard of quantity as well as quality of the wool produced, and thus adding greatly to the incomes of the sheep husbandmen.

Among those pure bred flocks from which bucks may be chosen, with a view of effecting this important purpose, that undoubtedly superior to all others, within our knowledge, in the United States, is possessed by Mr. D. C. Collins of Hartford, Conn. Travelling in Europe in the year 1839, and having his eye occasionally upon its Agriculture and improved stocks, among other things, this gentleman was struck with the marked superiority of the Spanish Merino, composing the celebrated royal flocks kept at Rambouillet, in France, about 40 miles from Paris. He accordingly determined to procure a small breeding flock, with a view of raising bucks to restore the fine woolled sheep of our country to their original character for strength of constitution, and weight of fleece, together with excellence of quality. The following year he obtained two bucks and twenty ewes from the best of the Rambouillet flock, and brought them over to this country. These he has continued to breed here with great success, and has now a fine flock of their produce, fully equal to the original importation.

On p. 171, Vol. 1, of the Agriculturist, we gave a short notice of these animals; but the subject of the production of fine wool in our country seems at present to be so important, that we have thought we could not do our readers a greater service than bringing the matter up again for their serious consideration. Understanding, therefore, that Mr. Collins intended shearing his flock on the 15th of last month, we started for Hartford, and arrived there on the morning of the day previous for the purpose of inspecting them in full fleece, and then in their naked forms, as also some flocks alongside of them, of what may now be termed the native Merino. Altogether we spent three days in our examination, taking samples of the wool, weighing the animals and their fleeces, and studying their forms, from the lambs just dropped, up to the full grown sheep of a mature age. The result of our observations, and the information we obtained, with respect to these Spanish Merinos from the royal flocks of Rambouillet, and the produce bred from them in this country, is:—

1. They possess as good constitutions, and are as thrifty and as hardy as any native or imported sheep whatever.

2. They attain a great age, have been known to reach 20 years, and may be depended upon as good breeders and wool producers till 12 or 14 years old.

3. They have large, loose skins, full of folds, especially around the neck and below it, on the shoulders, and not unfrequently over the whole body; the wool thickly covering its surface, the forehead, cheeks and the legs clear down to the hoofs, giving the fleece the appearance when shorn and spread out in its ample dimensions, of having been taken from the carcass of a huge buffalo, rather than so small an animal as the domestic sheep.

4. The fibre of the wool is very fine, quite equal to the best Merino in Spain, and is the very antipodes of that of which so much complaint is made by the manufacturer, of being harsh, dry, crispy and wiry. The fleece opens of a brilliant creamy color within, on a skin of rich pink, and is soft, glossy, wavy and very even over the whole body; is exceedingly close and compact, and has a yolk free from gum, and easily liberated when it comes to be washed, but which protects the wool from the weather, and keeps it free of the dead ends that are so objectionable, and that make so great a loss in the more open fleeces of the Saxons and their crosses. It becomes of the purest white when scoured by the manufacturer, and still retains its mellow, oily touch, so grateful to the handling of good judges. Its felting properties are beyond dispute, making it a choice material for the manufacture of fine broadcloths and cassimeres.

We are tolerably familiar with the Merinos imported direct from Spain, and the subsequent breeding in the United States, and we find the distinguished superiority of the Rambouillets over them, is in the size of their skins, enabling them to cut a greater proportion of wool. In their form they resemble the Paular Merinos, more than any other tribe of Spanish sheep that have fallen under our observation. They are also from one tenth to one fifth larger in carcass; are equally thrifty, hardy and long-lived; give more wool for their size, and of a better quality; and upon the whole, present a grander and more noble appearance. It is not contended that the Merinos of any tribe have the finished, full round forms of the English mutton sheep.—They have been bred for other purposes. Their flesh is reasonably good when made wethers, and killed at a suitable age, and their forms are susceptible of improvement, for in this particular we occasionally see them nearly equal to a South Down or Leicester.—*Amr. Agriculturist.*

The Sunny Side.—How much more pleasant it is to the pure heart to be good—to kindle the more gentle and noble feelings of our nature—than by misrepresentations, hints or dark inuendoes to break into long established friendship and disturb the good feelings of years of intimacy. In all our associations, commend us to him who ever presents the sunny side of life's picture to our gaze; he who has always a "pleasant word to speak," and is ever disposed to fling the mantle of oblivion over the foibles of erring man. Such a man we could wear in our "heart's core—ay, in our heart of hearts." But from the mischief maker, whose bosom is filled with a canker who knows no pleasure except that which torments others, "good Lord deliver us."

A Veteran.—The Journal of Commerce speaks of a horse driven into Wall street every day, which though forty-two years old, is as surefooted, sprightly and playful as a colt.

ON THE COMPARATIVE ADVANTAGES OF HERDSGRASS AND CLOVER AS GENERAL IMPROVERS OF THE SOIL.

GENTLEMEN—I should not have ventured to deviate from the rules of the Club, in submitting my views *in writing* on the subject of the comparative merits of Herdsgrass and Clover, as general improvers of the soil, but for the invitation to do so, which was given to me at the last meeting. With this apology, I shall proceed at once to the subject in hand.

That no extended system of improvement can be rapidly and successfully carried on, without the aid of the artificial grasses, as a general rule, will, I presume, be conceded by all present.

Manure, which is essential to the improvement of all soils, should be abundant on every farm, and every agent which aids in increasing the quantity or quality, without detracting from the fertility of the soil whence it is taken, is desirable, in proportion as it effects this object.—No agents of this kind, so susceptible of extended application, have yet been employed, as the artificial grasses. As food for stock, they constitute the cheapest, as well as the most nutritious; as covering for the soil, to shield it from the impoverishing effects of the frost and winds of winter, and the parching sun of summer, they constitute the most complete; as litter or soiling for stock, they are the cheapest, richest and most abundant; and as agents to prevent the gradual washing away of the soil by heavy rains, none have been found so effectual. So, that, whether we use them as food for stock, top-dressing for lands laid out to rest, or litter for our stables, farm-pens, &c. their value must be admitted. That they, or some of them, are in general essential to extensive improvement, will also be readily admitted; but the question of the comparative advantages of herdsgrass and clover, is one that admits of more doubt.—When land, and especially tobacco land, is to be cultivated on the three shift system, clover is certainly preferable to herdsgrass, for the reason, that it forms a more speedy and a more complete covering for the land, when laid to rest; the clover requiring one year only to arrive at maturity, while the herdsgrass requires several, to produce such a turf as is adequate to any great improvement. But when the four or five shift system is pursued, I have no hesitation in giving the herdsgrass the preference; and so far as the tobacco crop is concerned, I have never known it to fail on herdsgrass turf, well cultivated, while clover lots frequently fail entirely, from want of its necessary concomitant, *plaster*, or from the ravages of vermin or some other unknown cause. As a fallow for wheat, I consider the herdsgrrss totally unsuitable, on account of the difficulty of eradicating it, particularly on moist land—while the clover is easily destroyed by summer fallow. As a forerunner of corn, I consider the herdsgrass objectionable, on account of the difficulty of preventing its growth among the young corn, and the additional labor which it requires to reduce the strong turf which it forms; all which may be partially overcome by early working. But it is chiefly as a hay crop, and as a grazing grass, that I give this the preference to all other meliorating crops relied on in this country. Among the many errors maintained and exploded in the agricultural community, there is not a greater, than that a small stock in proportion to the size of the farm, or in other words, that the "*non-grazing* system" is essential to improvement.—Under the mode pursued by many in this country, of keeping a large stock, without the aid of the artificial grasses, this might seem plausible enough, but many enterprising farmers and planters have discovered, that just in proportion to the quantity of the artificial grasses cultivated, is the means of grazing and keeping stock, and just in proportion to these, is the improvement in the stock, the facility of making manure, and the consequent improvement of the land. My own observation has satisfied me, that the dung dropped by cattle running on land cultivated on the three and four shift systems, without the aid of the grasses, bears no proportion either in quality or quantity, to that from land laid down in herdsgrass or clover. As hay, heardsgrass has no superior, whether you regard the quantity or the nutritive qualities of the food, for every variety of farm stock, or the litter which it affords for the stables and farm-pens. ere the herdsgrass has the most decided advantage over clover, not only in the quantity and quality of the hay, but in facility of curing and preserving it from the effects of moist or rainy weather, or from heat and mould in the shock or stack. Another advantage is, that those who cultivate herdsgrass, can always obtain their seed at a trifling expense of time and labor, while, as every tobacco planter knows who has tried it, the clover seed must either be saved at a great expense of both time and labor, at a very busy season, or be purchased, and thus become annually a heavy tax. Another advantage of herdsgrass over clover is, that land once well turfed will remain so for years, while clover begins to decline after the second year. And again, clover is not only not valuable for grazing after the month of June, but actually deleterious to stock, and particularly to horses, mules and sheep, while the herdsgrass affords fine grazing for every variety of farm stock throughout the whole year, with the exception of those portions of winter when every species of vegetation is locked up with snow or frost. Farther, the herdsgrass when once sufficiently thick to form a strong turf, even on land really poor, will, in a course of years, restore it to tolerable productiveness; while on the same land clover will not grow sufficiently without the aid of manure, to produce any obvious improvement of the soil. More than twenty years experience has produced but little change in my views in regard to these grasses, except that I am now persuaded that a judicious system of grazing ought to go with them, hand in hand.—The long practice of seeding poor, thin and pipe clay flats, in herdsgrass, has satisfied me that there is scarcely any such lands that may not thus be brought, even to tobacco heart, and especially where they are occasionally inundated. And I have long known, and probably you all know, that there is no land which produces finer tobacco than the old herdsgrass meadow. But I have yet to learn that any such land, or any other poor land, has been restored to tobacco heart by the use of clover alone.

I have but recently turned my attention extensively to the cultivation of herdsgrass on Bluestone, having from one or two failures to get a good stand, erroneously supposed that the fault was in the soil. I have ascertained, however, from the experience of the two last years, that it only requires, on oat land, to be seeded thick, immediately after the land is ploughed and before a rain ensues, to ensure a good stand. And that the soft, sandy hills, on the west side of the creek, present at this time as good a stand as any close, moist soil not more thickly sown.

While I would most urgently impress upon our Club, the importance of sowing grass exclusively, and especially herdsgrass, I am far from wishing to disparage, or enter the lists against clover. For I am myself pursuing the three shift rotation, of tobacco, wheat, and clover; and so far, have much cause to be gratified at the result. There is much too, depending on the peculiar situation of the farm, character of the land, and other circumstances, to determine the planter as to the expediency of cultivating the one or the other. I would earnestly recommend both, but with my present views, founded on the experience of others, as well as my own, I am constrained to give my most decided opinion in favor of herdsgrass as a general improver; and in coming to this conclusion I have not lost sight of the benefits to be derived from either. For the value of any material or crop used on the farm for improvement to be fairly estimated must be considered in all the various uses to which it is applied; and in all these I consider the herdsgrass as adding to the resources of improvement, not even excepting the raising hay for market; for I doubt not that after abstracting the hay crop, the meliorating effects of the remaining turf, will richly compensate the owner for all the trouble and expense of preparation, seeding, &c.

In this part of the country, we have no available resources for manure but those derived from the farm and its appurtenances. We have no right to expect that marl, lime, plaster, poudrette or any other substance of foreign growth or manufacture can ever be obtained here sufficiently cheap, to justify their general and extensive use. It becomes us, therefore, to cast about for some other material to supply their place; and to do this, we must (and the sooner the better) look at home, and here we may, in some measure, help to check that constant drain which empties our purses for the foreign capitalits and brings no corresponding benefits to ourselves.

Vegetable matter mixed with animal and other substances, must ever constitute our chief resource; and there is no vegetable matter more valuable, and none can be raised in greater abundance for the purpose, than herdsgrass.—Our branch flats, creek bottoms, and lands subject to inundation, might be profitably employed in its production. If it escapes the water, it will furnish the stock with food, if inundated, it will furnish them with litter. My own most valuable resource this year has been the yield of an inundated meadow, mowed and regularly cured and stacked in season—furnishing a quantity of good seed, as well as an abundant supply of litter. I prefer the herdsgrass, however, for food, and the quantity and quality of the manure raised from the stock to which it is fed.

Let me now, gentlemen, urge some considerations in favor of the artificial grasses which ought to come home to the feelings and the taste, as well as the pride of our club. Is there not something humiliating in having our eyes, whenever we ride or walk into our fields, greeted with the yawning gall, or the more hideous gully? or meeting by the wayside, the kine of Pharaoh, who, having devoured all the miserable trash and weeds, which mar the beauty of our fields, are themselves just about to be devoured by the buzzards? How do these scenes contrast with the verdant grass springing up in all its vigor and luxuriance, and clothing our fields in its beautiful habiliments; with the cattle of a thousand hills grazing bountifully thro' the day, and returning home at eve laden with deposites richer than those of the *mammoth bank*, and laying their grateful tribute at the master's feet, and causing his table to groan under the teeming abundance of milk, butter cheese and beef?

This, gentlemen, is no ideal picture--it is in reach of every man who will adopt the cultivation of the artificial grasses, and avail himself of all the benefits which will result from their judicious and economical use.

Should doubts still remain after the interesting discussion of this subject had at our last meeting and what has come before us at this, they can only be solved by judicious experiments of our own, or observation of the experiments of others. Permit we to state, however, in conclusion, that there is one fact which ought to weigh with no little force on the minds of our Club, and that is, that we know no instance of a skilful and enterprizing farmer or planter who, after having gone fully into the cultivation of the artificial grasses, "has returned, like a sow that is washed, to her wallowing in the mire." And that we know no instance of a country in a high state of agricultural improvement, where the artificial grasses are not regarded as the main stay and the one thing needful.

With these views, gentlemen, I must close this subject, not, however, without expressing my regret that I have not had time to prepare something more worthy of my enlightened auditory and the interesting and important cause which has brought us together, and which it is

to be hoped each member intends, to the best of his ability, to promote, whether in his own immediate practice at home, or generally throughout the bounds of the Club.—*Southern Planter*

LEGISLATIVE AID TO AGRICULTURE.

The subject of legislative aid to agriculture is one of so much importance, that we feel ourselves justified in occasionally referring to it. It is one which should certainly be kept before the farmers of the state, now that the experiment made is in such successful progress, as the friends of agriculture should be anxious to ascertain fully the operation of the present law, that they may act understandingly when the question for its renewal or discontinuance shall come before them. That the legislature will be governed by the will of the people, and that their opinion of the matter should be fully expressed, no one can reasonably doubt. That the present enactment in favor of agriculture has operated most beneficially, we have as yet heard no one dispute. The prejudices of many against the measure; prejudices honestly indulged, and originating in former errors connected with similar aid granted, though on conditions entirely different, have been done away; and perhaps no legislative act of the last five years, can be named about which there is so little diversity of opinion among all classes, as respecting the one by which a pittance of the State's revenue is devoted to the encouragement of agriculture.

There can be no question that the true cause of the efficiency of the present law in favor of aiding agriculture, is to be found in that provision which renders it necessary that the farmer should help himself, before he was entitled to expect help from the State. Experience in all matters of a similar nature, has demonstrated that there is no way in which the interest of individuals can be so soon secured, as by connecting the prosecution of the object with personal contribution. By rendering it necessary that County societies should be organized, and should raise an amount equal to that to which they were entitled from the State, the subject was brought home to the agriculturist, and the benefit he was to receive made dependent on his own exertions.

There has been a strange opinion prevalent on this subject of aid to agriculture, which was that while all other classes were receiving more or less aid or protection from government, the agricultural part alone were to be left to their own resources. The merchant sails his ships and carries on his trade under the fostering protection of the nation; the manufacturer keeps his hammers and spindles active through the same influence; but it is expected that the farmer, he who furnishes freight for the one, and sustenance for all, shall go on with no encouragement from the public, while he bears the burden of taxation, and keeps the wheels of that government by which he is neglected, moving. This State has appropriated forty thousand dollars, or eight thousand dollars per year for five years, for the benefit of agriculture; and what is the result? We see associations springing up in every county to avail themselves of the grant. Public opinion is directed to the importance of agriculture, and a spirit of emulation and improvement is excited. Cattle Shows and Fairs exhibit to farmers the vast difference between good and bad implements, superior and inferior stock, and by bringing farmers in contact with each other, do away those feelings of distrust and distance, which are too often operative where seclusion and confinement to the farm prevail.

There is another reason why the State should lend its aid to agriculture, which is yearly becoming more efficient, and more deserving of attention. Scientific and practical improvements in agriculture, are not a less decided common public benefit, than in any other department of life; and while no one grudges the sums expended for the purposes of education, as such, by the State, the farmer can fairly demand the extension of those benefits conferred at the present time by the application of science to agriculture, through the influence of societies formed and fostered by the aid of the State. The sum demanded is so trifling, compared with the object in view, that it is surprising the granting the required aid should have encountered so much opposition; and it can only be accounted for by supposing that the objections had reference rather to the manner in which aid was to be given, than to the granting of the aid in itself.

The money drawn from the treasury to aid the cause of education, has for its object the elevation of the masses by the extension of knowledge, or the means of acquiring it, to all; it is to teach them their rights and their duties, and the best means of fulfilling them; to erect and point out to them a higher standard of moral and intellectual power than the one their fathers were accustomed to contemplate. It is to aid in the extension of knowledge most essential to all, that the farmer claims the aid of legislation. That alone seems adequate to spread the rich results which the labors of science, and the experiments the principles developed have produced, before those who are the most interested in them. No matter what the subject may be, if it is one of common benefit, commerce, manufactures, education, agriculture, all have a right in proportion to their importance, and without infringing on the rights of others, to look to legislation for aid. If there is a pursuit more ancient, more honorable, or more deserving of public aid than agriculture, it is still to be pointed out; if there is one in which the same sum will produce greater or more beneficial results, it is still to be shown.

We trust that in the examination of this subject, no person, certainly no farmer, will allow any considerations except such as spring from a regard to the public welfare, to have for a moment a place in his bosom. All party feelings, all narrow and contracted views, all sectional or personal jealousies, should be eschewed at once and forever. It is a subject in which all are interested, for the cultivation of the soil and its products, constitute the base of prosperity to all classes. Let the operation of the present law, in all its bearings and its consequences, be well and carefully weighed; and when the time arrives for its re-enactment, with such alterations as experience may suggest, we cannot believe that any enlightened legislator will be found among its opponents.—*Alb. Cultivator.*

BLIGHT OR MILDEW IN WHEAT, COMMONLY CALLED RUST.—The period of maturity most proper in every respect for the cutting of wheat, has long been a subject of discussion among practical farmers, both in Europe and this country. So long as wheat was threshed by hand, it was found necessary to let it ripen fully. But since threshing machines have been generally introduced, this difficulty has passed away. It is now, how does early cutting affect the weight and quantity of the grain, and quality of flour. In the summer of 1842, most of the pieces of wheat in my neighborhood were struck with rust. I had a small piece of winter wheat that was almost red with rust, and it was yet in the milk, the least pressure with the thumb and finger would reduce the berry to a pulp. I had the cradle put in and cut. Some of my friends said it would make good fodder, and others inquired if I was cutting for the straw, but I was firm in the belief that I should save the grain. I let it remain in swathe until the straw was quite dry, then bound and put in stock with cap, and let it stand ten days to cure well, then drew it in and threshed with machine, cleaned up and had 20 bushels and 8 quarts per acre, weighing 56 lbs. to the bushel, and makes good flour, while most of the wheat that was affected with rust and left to ripen was almost or quite a failure. Perhaps the most universal rust or blight ever known is that which fell upon almost every acre of wheat in the northern parts of Indiana and Illinois, in 1840; upon several thousand square miles of a rich soil, as ever the sun shone upon, not one acre in ten was worth cutting; early and late sown, and upon every grade of soil, all was affected. Had the farmers of those wheat-growing States, cut and cured their grain in a similar manner, as soon as the disease made its appearance, if it was so far advanced as to be fully in the milk at the time of the attack, the saving to themselves, and the country at large, would have been immense; for if left to stand and fully ripen, as in that case it was, it is not worth cutting; when cut in the proper time, the stem or stalk contains as much elaborated sap nearly as the perfection of the grain will require; but if this is allowed to escape as it will, if the disease progresses, the berry will be deprived of its proper nourishment, and the grain will be worthless. If the grain has so far advanced as the raw state, so called, when the attack is first seen, and cut immediately, the grain will be as plump and as heavy as if the rust had not made its appearance. THOMAS LANE.

Marcy, March, 1843.

New York Farmer.

SEEDS.

Every farmer should, as far as possible, raise his own seeds, as he will not only thereby avoid a considerable item of expense, but will, if there is proper care and skill used in their production, have such as may be depended upon.—There are but very few of the cultivated vegetables and fruits, of which the seeds can be depended upon for the production of plants like the original, if other plants of the same family are permitted to blossom in the immediate vicinity. The cause of this is to be found in the effect which the fertilizing dust or pollen of flowers has on the germs or seeds, when different varieties are placed so near each other that intermixture takes place. It is in fact a real cross, as distinct as that of animals, and with as decided results. For the philosophy of the matter, we must refer to Professor Lindly's work on Horticulture, or Roget's Animal and Vegetable Physiology. Every farmer or gardener is aware that apples or peaches raised from seeds, are rarely like the fruit that produced them; that melons, squashes, &c., are apt to mix or degenerate, and that where several varieties of corn are planted together, intermixture is certain to take place. We had a fine opportunity of verifying this last result two years since, when we cultivated some twenty four or five varieties of corn in a field, as an experiment, to test the period of ripening qualities, &c., and the singular manner in which the different colors and qualities were blended, was both curious and instructive. In purchasing seeds from our agricultural seed stores, farmers are very frequently disappointed in the plants produced, a disappointment frequently owing to there not having been sufficient care taken while growing the seeds, in preventing the possibility of intermixture. Beets may be mentioned as an instance of this, as perhaps there are more failures in these seeds, and more instances of degeneracy with these than any others. It may be considered a rare instance of good fortune, if the man who purchases blood beet seeds, does not find, when they grow up, that his roots are a coarse, unpalatable article, of some shade between red and white, or perhaps yellow, and utterly unlike what he expected. We have found that this result has been prevented, if, when the seed beets are set out, and the stalks shoot up, we examine them, and select for preservation those plants, the stems of which are of a deep red color; or when white or yellow are desired, selecting the purest of the kinds, and destroying the others at once. Planting for seed at such distances that the intermixture will not take place in the way pointed out, will also secure the seed from deterioration; but this, except with professed seed growers, is not always convenient. The best way to keep the varieties of early cucumbers, summer and other squashes, &c., when grown as farmers usually produce

them in their gardens, is to allow those that set the earliest, and of course nearest the root, to remain for seed. Experience shows that these are less liable to crossing and degeneracy than those that set later, owing, perhaps, to the number of other blossoms being smaller, and the danger of the fecundating pollen being transported by flies, bees, &c., proportionably less.—One thing is clear, seedsmen cannot be too careful as to the quality of the seeds they put in the market. Carelessness as to the kind, or the purity, has an inevitable tendency to destroy all confidence in these necessary establishments, without which it is scarcely possible agriculture should reach the elevated position we trust it is yet destined to reach in this country.

Albany Cultivator.

RULES FOR BREEDING.

Although there is a great discrepancy of opinion upon some portions of the mysterious art of breeding, the following precepts, from the pen of one of the most distinguished anatomists in Europe, Professor Cline, are, we believe, universally received as established doctrines amongst those who have the best right to know; although dame nature sometimes amuses herself in setting at naught the most ingenious theories of philosophers.

When the professor objects to large bones he must not be misunderstood. From the bone and muscle strength is derived, and, we presume, the greater the quantity of either, the greater will be the strength of the animal; but the quantity is not always to be measured by size; indeed, as Mr. Cline remarks, they are generally found in an inverse ration. In some animals a much greater quantity, both of muscles and bone, is condensed into a much smaller space than in others, and this constitutes the great physical difference between the Arabian and their descendants, commonly styled "blooded horses, and those of other descriptions. The ivory of the blooded horse will always outweigh, though it will never out measure, the open, porous bone of the cart-horse. But where the density of fibre is equal, size will indicate quantity, and therefore strength. With equal quality of bone and muscle then, the largest animal will always be the most powerful. With this commentary, we give to our reader the Professor's opinions [from Mr. Bott's "Southern Planter,"] upon the following subjects:

"Muscles.—The muscles and tendons, which are their appendages, should be large; by which an animal is enabled to travel with greater facility.

"The Bones.—The strength of an animal does not depend on the size of the bones, but on that of the muscles. Many animals with large bones are weak, their muscles being small.—Animals that were imperfectly nourished during growth, have their bones disproportionably large. If such deficiency of nourishment originated from a constitutional defect, which is the most frequent cause, they remain weak during life. Large bones, therefore, generally indicate an imperfection in the organs of nutrition.

"On the Improvement of the Form.—When the male is much larger than the female, the offspring is generally of an imperfect form. If the female be proportionably larger, the offspring is of an improved form. For instance, if a well-formed large ram be put to ewes proportionably smaller, the lambs will not be so well shaped as their parents; but if a small ram be put to larger ewes, the lambs will be of an improved form.

"The proper method of improving the form of animals consists in selecting a well-formed female, proportionably larger than the male.—The improvement depends on this principle: that the power of the female to supply her offspring with nourishment is in proportion to her size, and to the power of nourishment herself from the excellence of her own constitution.

"The size of the fœtus is generally in proportion to that of the male parent, and therefore when the female parent is disproportionably small, the quantity of nourishment is deficient, and her offspring has all the disproportions of a starveling. But when the female, from her size and good constitution, is more than adequate to the nourishment of a fœtus of a smaller male than herself, the growth must be proportionably greater. The large female has also a greater quantity of milk, and her offspring is more than abundantly supplied with nourishment after birth.

"To produce the most perfect-formed animal, abundant nourishment is necessary from the earliest period of its existence until its growth is complete.

"The power to prepare the greatest quantity of nourishment from a given quantity of food, depends principally upon the magnitude of the lungs, to which the organs of digestion are subservient.

"To obtain animals with large lungs, crossing is the most expeditious method, because well formed females may be selected from a variety of large size to be put to a well formed male of a variety that is rather smaller.

"Examples of the Good Effects of Crossing the Breeds.—The great improvement of the breed of horses in England arose from crossing with those diminutive stallions, Barbs and Arabians; and the introduction of Flanders mares in this country was the source of improvement in the breed of cart horses.

"Examples of the Bad Effects of Crossing the Breed.—When it became the fashion in London to drive large bay horses, the farmers in Yorkshire put their mares to much larger stallions than usual, and thus did infinite mischief to their breed, by producing a race of small-chested, long-legged, large-boned, worthless animals."—*Southern Planter.*

ALTERING COLTS.

The treatment of animals has arrested my attention from the time when as a boy, I have witnessed, in the lower part of this State and S. Carolina, the yearly collection of marsh tackies, calves, &c., for the purpose of marking, branding, cutting out the lampas, emasculating, docking, &c., and to this time I have hailed with pleasure any improvement, especially in the treatment of that noble animal, the horse. By degrees I have seen the barbarous practice of burning out the lampas and cutting out the hooks, give way, at least among the enlightened, to the more rational, and I think more curative practice of depletion and change of food.

And now, having witnessed, I am induced to describe to you an improvement in the emasculation of the horse, which strikes me as being well worthy of being generally known.

When I came to this neighborhood a few years ago, I was told of a man who performed the operation without tieing the horse in any way, and I am free to confess that I thought it was a mistake; but now, to me, seeing is believing, although it yet appears strange. Being at the house of a friend on Saturday last, I had an opportunity of seeing the performance under the following circumstances:

A three year old colt, with a simple bridle on, was backed into the corner of a worm rail fence, where he was held by a youth of sixteen, without any other restraint than the bridle and fence. The operator approached the animal with the same calm sang froid that an old bee-master handles a hive which he is about to rob of its honey; going to the right side, he laid hold of the bag with the left hand, and with the right laid open one testicle, and separated it in the usual way, and then did the same with the other, and so left them without any ligature; he then enlarged the opening in the envelop skin so that all the blood which came might freely fall off; a spoonful of lard and salt was then laid in to prevent an accumulation of coagulated blood on the parts, and he was then unbridled and turned loose. During the operation, there were no great efforts made by the horse to get away, and he was easily held in by the bridle; he appeared to incline towards the operator, as horses frequently do when they are tickled by the curry-comb; and once or twice he threw up the near hind leg as if to drive off a fly. There were no evidences of his suffering pain, such as groaning or the like. The man said he had operated on hundreds, and never lost one, or had been kicked but by one, and was successful with either old or young horses. A. S.

Oakland Farm, Cobb co., Ga.

Albany Cultivator.

ANALYSIS OF INDIAN CORN.

In our paper of March 22d, says the American Farmer, we gave an analysis by Professor Dana, of Lowell, Mass., of Indian Corn, Ruta Baga and Potatoes, upon which, among other things we then remarked:

"This analysis presents one other curious fact—it is this—that while the corn gives over 88 per cent of the *fat-forming principles*, and the potato only a little over 24 per cent; that in the *flesh-forming principles*, the potato greatly exceeds the corn, the former yielding 2.07, whereas the latter only gives 1.26."

This discrepancy between the product of *fat* and of *flesh*, in a grain so rich in nutrition as that of corn, appeared to us at the time to be strange, and hence the remarks we then made: we are pleased to find by the following correction, that the result as set down by Dr. Dana, to the flesh-forming principles of corn was erroneous; but while we make this remark, we must be permitted to point to another discrepancy which appears between the fat forming principles as stated in his note of correction, and that given in his communication of February 28th. In that communication they were stated at 88.43, in the present at 77.09, being a difference of 11.34, just the one existing between the present result, as regards the quantum of flesh forming principles and that formerly ascribed to it. This makes the aggregate result quadrate, but does not account for the error in the *fat-forming principles*, as the Doctor is silent as to how it occurred.

To the Editor of the New England Farmer:

Dear Sir—I ask leave to correct a material error in the statement of the results of the analysis of Indian corn which I send you, and which you published in your paper of March 8, 1843.

1.26 should be 12.6. Deducting this number, the product of multiplying the nitrogen of corn by 6.20, from the water of vegetation and the salts, we have 77.09.

The corrections thus made, the results are—

Flesh-forming principles—gluten, albumen, &c.	12.50
Fat-forming principles—as gum, sugar, starch, woody fibre, Oil, &c.	77.09
Water	9.
Salts	1.31
	100.

With regard, your ob't serv't,

Sam. L. Dana.

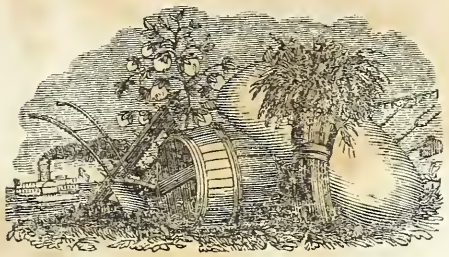
Lowell, June 10, 1843.

Incident.—The following singular incident, says the Central N. Y. Farmer, took place at Vernon Centre, in this county, on the premises of Gary Grant, Esq., and may be relied on as a matter of fact.

A heifer at the age of one year and ten days, brought forth a full grown and very good proportioned calf—the sire of which was not more than eleven months old at the time the calf came.

The above fact can be proved by the affidavit of respectable citizens, if it is doubted by any of our readers.

☞Nothing can be more touching than to behold a soft and tender female, who had been all meekness and dependence, and alive to every roughness, while treading the prosperous paths of life, suddenly rising in mental force to be the comforter and supporter of her husband under misfortune, abiding with unshrinking firmness the bitterest blasts of adversity.



WEDNESDAY, AUGUST 2, 1843.

BACK NUMBERS.—All new subscribers to the "Southern Cultivator" can be supplied with the back numbers.

TO READERS AND CORRESPONDENTS.

PURE BERKSHIRES.—Either our correspondent, "J. M. G.," or we have misconceived "A LOVER OF GOOD HAM;" for had we supposed that he designed to convey the idea that there were no pure Berkshires in Georgia, we certainly should have corrected his error. Our understanding of his meaning was, that those hogs which had been brought from the West, by drovers, and sold in Georgia as Berkshires, are mixed blood, and as we entertain quite the same opinion, we of course did not dissent from his position.

In reply to the suggestion of "J. M. G.," that Col. BONNER furnish for the "*Southern Cultivator*," such facts as he may deem of value and interest to the farmer, relative to the value and capacities of the Berkshires, we have only to remark, that we should be pleased to give his views to our readers, and we doubt not they will be equally pleased to obtain the opinions of one who has so much experience on the subject in this climate, as our friend Col. BONNER, and we therefore hope he will favor us with a communication.

IMPROVED CULTURE OF COTTON.—The reader will find in this number, an interesting communication from Dr. CLOUD, of Alabama, on the subject of his improved method for the culture of cotton, to which we invite attention. In justice to ourself, we must explain to Dr. C. why it was that we only gave an extract from his letter to the Albany Cultivator. The extract appeared in the second number of our paper, which was issued before we obtained an exchange with the Albany Cultivator, hence we made the extract from another paper, which only contained that portion of Dr. C.'s plan that we gave. We do not however regret the circumstance, as it has been the means of affording us an opportunity to introduce the Doctor to our readers in an original communication—an acquaintance which we trust will be cordially cultivated by all parties, and which we doubt not will be highly interesting and instructive, and, we hope, mutually beneficial, for we flatter ourself that the Doctor will avail himself of every occasion his leisure may afford, to give us the results of his experiments for the benefit of our columns.

AGRICULTURAL PAPERS, &c.—We need not urge upon the reader's consideration the plain, practical suggestions of our correspondents, JOHN FARRAR and "A. O." They are told in a language which but too truly discloses their origin to be from plain, practical men, men whose views have been formed upon much experience and close observation, and they are, therefore, worthy the consideration of every planter. Especially would we invite attention to the acknowledgement of Mr. Farrar as to the value of agricultural papers. It is indeed strange that the great mass of planters, while they observe in every other branch of their business that sound maxim which teaches, "when you have failed by one system try another, and invoke to your aid the light and experience of others," it is strange, we repeat, that they should hesitate to adopt it in that most important of all other pursuits, agriculture. Nevertheless it is true—most lamentably true. Go where you will and you find men whose whole lives have been devoted to the positive destruction of the finest land on the globe, and while they are ready to profit by the experience and observation of others on any other subject pertaining to their interest, they reject most positively any suggestion about farming, improving lands, &c. &c., and scout the idea of "*book farming*," as the mere speculative theories of visionary men. We however rejoice to find this prejudice is fast passing away, and giving place to a more enlightened and philosophical view of the matter, and we are particularly rejoiced to have the testimony of such a practical man as JOHN FARRAR in support of agricultural papers.

THE IRISH FARMER.

The following sketch of an Irish Farmer and his farm is from the Irish sketch book, by Thackeray, which we hope may not pass unheeded by our Agricultural readers.

"Before setting out on our second day's journey we had time to accompany the well pleased owner of H——town, over some of his fields and out-premises. Nor can there be a pleasanter sight to owner or stranger. Mr. P——farms four hundred acres of land about his house; and employs on this estate no less than one hundred and ten persons. He says there is full work for every one of them, and to see the elaborate state of cultivation in which the land was, it is easy to see how such an agricultural regiment were employed. This estate is like a well ordered garden—we walked into a huge field of potatoes, and the landlord made us remark that there was not a single weed between the furrows; and the whole formed a vast flower-bed of a score of acres. Every bit of land up to the hedge-side was fertilized and full of produce; the space left for the plow having afterwards been gone over, and yielding its fullest proportion of 'fruit.' In a turnip field were a score or more of women and children, who were marching through the ridges, removing the young plants where two or three had grown together, and leaving only the most healthy. Every individual root in the field was thus the object of culture; and the owner said that this extreme cultivation answered the purpose, and that the employment of all these hands, (the women and children earn 6d and 8d a day all the year round,) which gained him some reputation as a philanthropist, brought him profit as a farmer too; for his crops were the best that land could produce. He has further the advantage of a large stock for manure, and does every thing for the land which art can do. Here we saw several experiments in manuring. An acre of turnips prepared with bone dust; another with 'Murray's composition,' whereof I do not pretend to know the ingredients; another with a new manure called guano. As far as turnips and a first year's crop went, the guano carried the day. The plants on the guano acre looked to be three weeks in advance of their neighbors, and extremely plentiful and healthy. I went to see his field two months after the above passage was written; the guano acre still kept the lead; the bone-dust ran the guano very hard; and the composition was clearly distanced.

"Behind the house is a fine village of corn and hay ricks, and a street of out-buildings, where all the work of the farm is prepared. Here were numerous people coming with pails of butter-milk, which the good natured landlord made over to them. A score of men or more were busied about the place, some at a grindstone, others at a forge; other fellows busied in the cart-house and stables, all of which were as neatly kept as in the best farm in England. A little further on was a flower-garden, a kitchen-garden, a hot-house just building, a kennel of fine pointers and setters—indeed a noble feature of country neatness, thrift, and plenty.

"We went into the cottages and gardens of several of Mr. P.'s laborers, which were all so neat, that I could not help fancying they were pet cottages erected under the landlord's own superintendence, and ornamented to his order. But he declared that it was not so; that the only benefit his laborers got from him was constant work, and a house-rent free; and that the neatness of the gardens and dwellings was of their own doing. By making them a present of the house, he said, he made them a present of the pigs and live stock, with which almost every Irish cotter pays his rent, so that each workman could have a piece of meat for his support; would that all laborers in the empire had as much! With regard to the neatness of the houses, the best way to insure this, he said, was for the master constantly to visit them, to awaken as much emulation as he could among the cottagers, so that each should make his place as good as his neighbor's—and to take them good-humoredly to task if they failed in the requisite care.

"And so this pleasant day's visit ended. A more practical person would have seen, no doubt, and understood much more than a mere citizen could whose pursuits have been very different from those noble and useful ones here spoken of. But a man has no call to be a judge of turnips and live stock, in order to admire such an establishment as this, and heartily to appreciate the excellence of it. There are some happy organization in the world which possess the great virtue of prosperity. It implies cheerfulness, simplicity, shrewdness, perseverance, honesty, good health. See how, before the good humored resolution of such characters, ill-luck gives way, and fortune assumes their own smiling complexion! Such men grow rich without driving a single hard bargain; their condition being to make others prosper along with themselves. Thus, his very charity, another informant tells me, is one of the causes of my host's good fortune. He might have three pounds a year from each of forty cottages, but instead prefers a hundred healthy workmen; or he might have a fourth of the number of workmen, and a farm yielding a produce proportionably less, but instead of saving the money of their wages, prefers a farm the produce of which as I have heard from a gentleman whom I take to be good authority, is unequalled elsewhere."

"THE GREAT AGRICULTURAL ERA COMING."—Under this head, the Long Island Star, after alluding to the labors of Liebig, Johnston and others, in connection with the application of the principles of chemistry to agriculture, says:

"A greater advance than heretofore has, we understand, been latterly made. Dr. Wm. Valentine, heretofore better known in other departments than that of a chemist, in which he has been well educated, and for which he has a natural aptitude, has been lately devoting his whole attention to agricultural chemistry. By

means of powerful apparatus, he has been analyzing soils with a view to applying the best means of fertilizing them, and has been learning the means of compounding by means of chemical agents, the best manures. He believes, (and other scientific men believe so likewise,) that he has acquired the art of enabling farmers to manure their land at one-tenth the ordinary expense of money and labor. His discovery has been patented, and he has recently been employed in laying vats on the farms of Wm. M. Weeks and others, at Glen Cove, and is calculating to extend his operations widely."

Since the above was in type, we have had an opportunity of conversing with Dr. Valentine, on the subject of his researches in agricultural chemistry. He explained to us the substance used, and the manner of making his artificial manure. That it will prove a powerful fertilizer, we do not doubt, and are glad to learn that its merits are being put to a practical test by several farmers on Long Island, the result of which will in due time be made public.

We have received a note from Dr. Valentine, setting forth the advantages to be derived from his discoveries, which shall have a place next month.—*Albany Cultivator.*

FIVE HUNDRED REASONS WHY LAND SHOULD BE IMPROVED.

More can be cultivated with the same hands, because tilled with less hard labor.

Briers and shrubs disappear, and grasses appear.

Cattle damage the land and grass less, because they do not have to tramp so great a space to fill themselves.

Less land required; less fencing.

Less trotting after cows and horses.

Less work at the smith's shop.

Fewer whips worn out.

Stronger teams

More manure, and less need for it.

A stimulus to action.

A protection against winter's frost and summer's heat.

A good example to children and neighbors.

Keeps off sheriffs and buzzards.

Stops emigration.

Produces money for books, and time for reading.

Surplus time and money for erecting buildgs.

Also school houses and churches.

Produces time to travel, to lecture on economy and preach the gospel.

Produces sociability and hospitality.

Makes a paradise of a barren, plenty out of poverty, a blessing out of a curse.

The barn is filled, the dairy is filled, the purse is filled, and the soul is filled with gratitude.

If the reader will reflect, he will discover that the number of good reasons why the farmer should improve his land, is almost innumerable.—*Albany Cultivator.*

Curious Result.—A friend has shown to us some scions, which he has just received from a gentleman on Grand Isle, Vt., which produce apples partly sweet and partly sour. This singular production was brought about in this manner. A bud was taken from an apple tree producing sour fruit, another from one producing sweet; the two buds were neatly cut into halves, and a half of each kind joined together, forming a bud which was inserted in the stock as usual.

We have often heard of this method of producing two distinct varieties of fruit in the same apple, but we have doubted it, and though our information appears to come now from a very respectable source, we are rather incredulous, though such a thing may be possible. It is easily tested and we hope the point will be settled. Our friend thinks to test by getting the two kinds of fruit from the scions sent him, but whatever fruit they may produce will prove nothing, unless there is proof of their origin. We have seen of natural fruit sweet and sour fruit in the same apple. We advise him to be thorough in his experiment and begin with the bud.—*Boston Cultivator.*

TO KILL WEEDS.

Is there any manure that will kill *weeds?* is a question not unfrequently put. Will nitrate of soda, or nitrate of ammonia, or guano, or urates? That such questions should be asked, proves one thing at least, that there is a general desire to know how to extirpate weeds. We wish we could add that they also indicate some acquaintance with the rudiments at least of vegetable physiology.

Weeds, like other plants, have each their peculiar constitution, prefer certain kinds of food, and perish on the application of others. We have seen a pound of nitrate of soda administered to a Seakale plant without visible effect; half an ounce would probably destroy a Rhododendron. Common stable manure is prejudicial to Coniferous plants, and in overdoses will kill them; an oak feeds greedily upon it. So it is with weeds. Excessive doses of salt will destroy all ordinary vegetation, weeds included, but promote the growth of asparagus in a most remarkable degree, thus proving itself to be a poison to one plant and a nutritious food to another. But salt cannot be used in large doses to extirpate weeds generally, because some, like the asparagus, may flourish under its action, and most crops will certainly be destroyed by it. Professor Henslow succeeded in destroying moss and weeds on gravel walks, by means of corrosive sublimate, green vitriol, and blue vitriol, especially the last. But corrosive sublimate destroys every living form of vegetation, as well as the weeds; and the two sorts of vitriol have no permanent action, encouraging the subsequent growth of many sorts of plants, and so promoting the vegetation of weeds rather than destroying it.

In practice, these chemical agents can only be employed for the destruction of weeds in certain special cases, such as the asparagus, which thrives under doses of salt, which kills most other plants; or as tobacco, which feeds greedily upon quantities of nitrate of soda, which would destroy any ordinary vegetation. In general, we must look to other means for ridding ourselves of troublesome weeds, and we shall find those means in *industry* and *common sense.* The two separate are good things, but they are better mixed together. The plain and obvious rule is to pull weeds up as fast as they appear, and while still in the state of seedlings. Then every plant that is removed is effectually destroyed, and leaves no young ones behind it.—Any boy, at half-a-crown a week, can be taught to distinguish them, and if the plan is persevered in, there will very soon be nothing for the boy to do. Strict attention must, however, be paid to their thorough extirpation when young; it will not do to pull up *almost* all, and to leave the remainder to seed; for in that case the labor has to be all gone over again.—*Gard. Chron.*

Salting and Preserving Butter.—We annex a receipt upon this subject, and will take this occasion to say, that we have no doubt it is a good one, though we should prefer one we have used and *know to be good.* The paragraph below states that butter, packed away as therein directed, will keep ten years. Upon this part of the subject we cannot speak from any knowledge of our own; but with regard to the time it will keep, put away agreeably to the receipt we shall give, we are enabled to speak advisedly, as our butter was potted in the month of June, and was as fresh and sweet when opened for use, in the month of December following, as when first made, having preserved all its richness of flavor.

We took six ounces of fine Liverpool blown salt, four ounces of saltpetre, and six ounces of loaf sugar, and after pulverizing the whole, so as to make a fine powder, we incorporated it with the butter, after the buttermilk had been thoroughly worked out, at the rate of one ounce to the pound, then packed it away in stone jars, the tops of which we covered, first with clean cloths, and then with bladders, so as to completely exclude the air. Thus treated when fresh and well made, we have no hesitation in saying, that butter would keep any desirable length of time, though we should be unwilling to risk the opinion that it would keep, as maintained in the receipt below, ten years.

To Salt Butter—Beat well up together in a marble mortar, half a pound of common salt, with four ounces of powdered loaf sugar; to every pound of newly made butter, (the milk being well drawn off by beating,) put an ounce of the mixed powder, incorporate it well; put the butter in pots for keeping. In about a month, not before, it will be fit for use, and it will continue for ten years as good as butter newly salted.—*Am. Farmer.*

☞ It is not by the exclusive cultivation of one faculty—however astonishing the result may thus be obtained—that a truly great mind can be reared; nor is it by the exclusive cultivation of the intellectual powers, while that of the moral feeling is neglected, that a truly great and good character can be developed.

AUGUSTA MARKET.

Tuesday p. m., August 2.

Cotton— Since our last report we have had a very quiet time in our cotton market until today, when sales were made of upwards of 400 bales, at prices fully ½ cent lower than at the highest prices since Christmas.

Money—Checks on the North cannot be had at any of our Banks at a less rate than ½ ₩ cent premium. Central Bank notes sell from 9 @ 10 ₩ cent discount, and State 6 ₩ cent Bonds at from 72 @ 74 cents.

CONTENTS OF THIS NUMBER.

	PAGE.
Pure Berkshires; Improved Culture of Cotton	121
Smut in Wheat; Practical Hints; Spaying Swine	122
Fine Wool Sheep; the Sunny Side; a Veteran	123
Comparative Advantages of Herdsgrass and Clover	124
Legislative Aid to Agriculture; Mildew in Wheat; Seeds	125
Rules for Breeding; Altering Colts; Analysis of Indian Corn; an Incident	126
To Readers and Correspondents; the Irish Farmer; the Great Agricultural Era Coming	127
500 Reasons why Land should be Improved; Curious Result; to Kill Weeds; Salting and Preserving Butter	128

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☞All communications must be post paid

SOUTHERN CULTIVATOR.

VOL. I. AUGUSTA, GA., AUGUST 16, 1843. No. 17.

IMPROVOMENT OF DOMESTIC STOCK.

Few things are of more importance to the agricultural interest of a country, than their domestic animals; and any decided improvement in the breeds, forms a solid addition to the productive wealth of a nation. For instance, any change in the character of our cattle, which, by adding to their weight, aptitude to feed, early maturity, &c. should give a gain of twenty per cent on their value, would increase the worth of this item alone about fifty millions of dollars.—That such an improvement might be made on the common stock of this country, there are few intelligent men that at the present time will doubt. Facts and experience are most conclusive on this point; and what is true of cattle, will also hold true of all other varieties of domestic animals.

But while most will readily admit the necessity and practicability of improvement, there are some differences of opinion among practical and well informed men as to the best methods of effecting it. Some contend that the only rational prospect of improvement is to be found in introducing foreign stock, and breeding from these, to the exclusion of all native animals.—There are others who maintain as strenuously that there is no necessity whatever for any introduction of foreign blood; that we have among ourselves, and in our own herds, all that is necessary to produce as perfect animals as any of the improved breeds of Europe. Others assert that the truth lies midway between these extreme opinions; that the true course is to import valuable animals, if they can be obtained, from abroad, and breed them to our most valuable and choice stock, taking care to select such as are the best adapted to produce any given result or quality. We shall examine these opinions in their order.

Careful and skillful breeding lies at the foundation of all improvement in stock, and this is mainly effected by judicious selections. Color, form, quality and disposition, are all under the control of the breeder. He can equalize and harmonize the whole, or he can develope one point at the expense of the others. It is rare indeed, perhaps never, that any single point is found in its highest degree of excellence, except at the expense of some other quality. Thus the taking on flesh rapidly, is incompatible, from the very nature of the case, with a copious secretion of milk; and the deepest and best milkers of the herd, may usually be set down as the most raw boned, not to say worst looking of the whole. The reason of this is obvious: the quantity of nutritive matter taken in the food is of necessity limited, and it is impossible for it to perform two offices, or rather be in two places at once. It cannot go to the formation of flesh and fat, and yet be secreted in the form of milk. The term *best*, then, as usually applied, may admit of a different meaning. The best animal for the grazier or butcher, is not necessarily the best for the dairyman; although there are few deep milkers that will not, when the secretion of milk is suspended, take on flesh rapidly—a fact which shows the incompatibility of the two.—The best animal, or the one which it should be the object of the breeder to produce, is the one that combines the most valuable qualities, and it is in this sense that the term should be always understood.

The number of those who insist that we are to look to England, and to the produce of importations from that country alone, for the improvement of our stock, is of course limited. There is something absurd in the idea of replacing the ten millions of our native cattle by imported ones, or their progeny, in any reasonable term of years. Besides, had we the means to make the importation, they have not the animals for us. Notwithstanding the attention paid to the breeding of animals in England, the number of the improved animals is still limited; and though cattle to meet any demand might be supplied, such as we should require, or ought to require, could not be had. Great changes in the character of the stock of any country, demand time. It has taken more than two hundred years since Gov. Winslow introduced the first three heifers and one bull into this country, to bring up our stock to its present numbers. This was in 1624; and time would enable us to fill our country with imported stock, were it necessary to wait for such a consummation. As the question, however, relates to present improvement, the idea of depending on importation wholly, must be discarded.

The second position, viz: that we have in our present native herds all the materials necessary for improvement, and that a recurrence to foreign improved breeds is unnecessary, is far more plausible, and has a much greater number of supporters, than the one we have just considered. It is argued, and truly, that all the improved breeds are made up breeds; that it is idle to seek for what may be called an original breed; that the varieties of domestic cattle are depending on climate, crosses, or perhaps in some instances on accidental circumstances; that the improved cattle of England have been bred almost within the memory of man, from old varieties already existing there; that what has been already done, may be done again, and that nothing but the same judgment in selecting animals to breed from, and the same skill and perseverance in following the laws of breeding to their results, is wanting, to produce as valuable stock from our native varieties, as has been produced from the native varieties of England. We have purposely stated this argument in its strongest form; because, while we admit the possibility of producing, in this country, improved breeds equal perhaps in value to those at present existing in Europe, we think it would be the height of folly to undertake the task, in preference to availing ourselves of the labors and skill of European breeders. To make ourselves understood, we will select the Short Horns or Durhams, as the breed best known, for the purpose of illustration.

We can trace the Short Horns, as a distinct breed, to its originators, Charles and Robert Collins, some fifty years since. Others, as Berry and Coates, co-operated most effectually in forwarding the improvement commenced by them; and within the last twenty years, the number of breeders of this stock has multiplied in every part of England. It cannot be denied that more skill has been exhibited, a greater acquaintance with the true principles of the improvement of stock acquired, and the real points that constitute the value of animals more fully developed in this case, than in any previous instance. Scarcely a variety of domestic cattle can be found, from which animals may not be selected, with one or more points as faultless, and as well developed, as in the improved stock; but in most cases, these valuable points must be considered as accidental, as experience proves there is no certainty of there being continued in their offspring. The science of breeding consists in uniting in one animal as many of these valuable properties as possible, and rendering them constitutional and permanent, so that they may descend to their progeny, or so that the danger of their loss may be avoided. This is what has been done in the case of the Short Horns. That their excellencies are permanent, and fixed in the breed, is proved by their invariably imparting more or less of them to any variety with which they are crossed; that the blemishes and faults occasionally to be found in them, are to be considered as accidental, and not inherent in the breed, is proved by the fact that these defects are rarely propagated or reproduced in their progeny. It has taken at least fifty years to bring up the Short Horns to this point of excellence; and there is no probability whatever that any modern skill or knowledge could materially shorten this period in engrafting these valuable qualities upon the native stock of this country, by simple selection and breeding from our varieties alone. We must, then, to raise up an American breed from native stock only, combining as many valuable qualities as the Short Horns at present possess, employ some fifty years, with much labor and money, and then find ourselves at precisely the point of improvement where the English breeders now are. We think, then, that the advocates of an exclusive American breed, or one produced from our native varieties, without reference to foreign stock, are guilty of as great an absurdity as those who would rely on imported stock only, to replace with an improved stock our native herds.

The third course for improvement is that of those who believe that the best way is, to obtain the best and highest bred animals from abroad, when such can be procured, and breed them to our best and choicest native stock, having reference, in our selection of animals, to those points we consider most desirable in stock, or in which, perhaps, the imported are the most deficient. And this is the method to which we give a decided preference, and to which, it is believed, we must resort and adhere, before any essential change in the character of our stock, generally, will be effected.

There are some who seem to suppose that we are to regard the high bred imported animals as perfect, and incapable, by any skill of breeding, of further improvement. No breeder, however, who has any knowledge of his profession, will view the matter in that light. He sees in the Short Horns, for instance, animals very superior to the common stock of the country; animals that combine a far greater number of valuable points, and are of consequence a decided improvement upon any native breed; but he is far from looking on them or any other breed of cattle as perfect, or incapable of further improvement. On the contrary, he sees in these improved breeds, and these fine imported animals, the basis of still greater improvements; he sees in them, what the labor of the most skillful and careful in England have taken fifty years to accomplish; and instead of going back to the point from which they started, he intends to make the highest vantage ground they have reached his

starting point in the career of further progress and improvement.

In breeding from foreign improved stock, it is necessary the American farmer or breeder should pay particular attention to the purity of blood, and the predominating qualities of the animal. The principal value of any improvement in animals, consists in its permanency; indeed, this quality is one of the main things that marks the difference between the high bred imported animal and *some few* of our native stock. If the improvement is not permanent; if the valuable qualities have not become fixed and constitutional, there is no security that they will be imparted to the progeny, or that the high raised hopes of the breeder may not end in bitter disappointment. It is in determining this question of blood, that the pedigree becomes important; and a reference to the Herd Book will inform the breeder whether he may depend upon stock possessing the qualities of their parents, or leave it to be determined by the event whether that stock shall possess most of the qualities of the Short Horn or the scrub. In regard to the qualities of the imported animals from which we expect improvement to our herds, it appears to us that there are two points that have been sometimes overlooked in making our selections. We have not paid attention enough to their milking properties, or their ability and aptitude to labor. The old Short Horns were the best milking breed in England—a reputation which, as a whole, certainly does not belong to the improved breeds. That there are some superior milkers among them, is notorious; and that milking deep might be made one of the peculiar characteristics of the breed, no well informed breeder doubts. We very much question, however, whether there is at this time in Europe or in the United States, a herd of *any* improved stock, Short Horns, Herefords or Devons, from which twenty five cows can be setected, that would produce as much butter and cheese as the twenty five native cows mentioned at page 79 of the May Cultivator, or that from the twelve native cows mentioned at page 85 of the same number.* The reason is a plain one; other qualities than deep milking have been principally regarded by their breeders; beef, and not milk, has been the great object. That deep milking can easily be bred into them, no one questions; and this we believe is one of the points that calls for immediate attention. Another point that has not been sufficiently attended to, is aptitude to labor. In this country, very few instances can be found in which high bred animals have been put to the test of labor; but in England, Short Horn bullocks have been subjected to the yoke, and, unless we are misinformed, were found in this respect inferior to the Devons or the Herefords. Indeed, the forms of the animals themselves, indicative of diminished activity and power of locomotion, would lead the observer to expect such a result; and by some it may be considered doubtful whether the aptitude to labor can be engrafted on this stock, unless at the expense of other more important and valuable qualities.

A question, most important to the agricultural interests of the country, is not unfrequently asked, and it is desirable it should be correctly answered; that question is, how can the desired improvements be most certainly and expeditiously made? On this point we are fortunately not left to theory alone; but we have the result of many experiments, which would seem to be decisive of the matter. In all crosses from a high bred or made up stock, with inferior breeds, there is a constant and powerful tendency to deterioration. Habit is hardly equal to a contest with nature; implanted qualities, unless carefully guarded, are apt to disappear before the powerful tendencies of natural and constitutional ones; and it is to prevent this degeneracy, to retain all the old qualities that are valuable, and add new ones that are desirable, that requires all the skill and caution of the breeder. Man himself, studied physiologically, has furnished some of the most useful lessons which can be offered for the guidance of the modern breeders of animals.

Our opinion as to the true course to be followed, and the one which we doubt not will be generally adopted, is, for the breeder to select a full bred bull of the kind preferred, possessing those qualities most desirable, o indicating that they are inherent in the breed. Much is depending on the proper selection of the male, for it is he that stamps most indelibly his character on the progeny. Ascertain whether the animals from which he is descended, the particular family, we mean, are noted for any particular quality, and what that may be. In the same breed, and of equal purity of blood, animals may be found in which the predominating quality differs essentially. Aptitude to fatten, deep milking, excellence in the yoke, kind handling, &c. &c. may not be prominent in all animals of a breed; and it is for the breeder to select with reference to the qualities, whether of form or color, most desirable. Having secured bulls of undeniable excellence, let the breeder next select from his native stock the best cows he possesses, or that can be procured—those in which the qualities of easy feeding, deep milking and kind dispositions appear to be the most strongly marked and fixed, and breed from such cows only, if he hopes to effect a permanent improvement in his stock. We have never known an instance in which such a cross did not at once mark and change the character of a stock for the better. The cattle shows and fairs of our country prove that these half bloods are far superior to the native stock, in every case where ordinary attention has been paid to selection in breeding, and that in many instances they have approximated in form and value to the pure blooded progenitor. In this *first cross* we have rarely known the farmer or breeder to be disappointed; it is in the next and succeeding steps in the progress, from which disappointment has arisen, and this has been occasioned by causes perfectly easy to explain. How often have we heard it said, "our first calves were almost equal to the imported bull, but now they are no better than old fashioned stock." And this was true; for they were nothing but the old stock. Let it be remembered that breeding from crosses, without recurrence to pure blood always degenerates; but where the first cross or half blood is bred to a full blood, a half blood heifer to a pure blood bull, for instance, improvement is sure to follow. The course pursued by many, perhaps most of our farmers is this. A native cow is bred to a pure short horn, and the progeny is a fine bull calf. This calf, a half blood, is used for a bull with his herd of native cows, and the farmer is surprised to find such a falling off in the qualities of his calves from that of their sire. Now the true course would be, if the progeny in the first instance was a bull calf, to fit him for the yoke or the shambles; if a heifer, to breed her to a pure blood bull, and a good calf might be considered certain. By this recurrence to pure blood, the stock will be constantly rising; by breeding from crosses without such recurrence, it will be as certainly sinking.—By proceeding in the way here pointed out, using full blood bulls and the best native cows, our stock as a whole would be rapidly improving, and the way prepared for an advance on any of the present breeds.

But it may be doubted by some, whether any improvement on the best of the present high bred cattle, is possible, and the idea of it be scouted as an absurdity. "What," it may be said, "talk of improving a breed by crossing them with those still lower in the scale?" We answer yes, and hope to show there is nothing chimerical in the plan. For illustration, we will again recur to the Short Horns, as unquestionably at the head of the improved breeds.—Breeders have enumerated a great number of points as going to make a perfect animal; to make one absolutely perfect, we will suppose that thirty enumerated qualifications are requisite; that the Short Horns, as approaching the nearest to this standard, possess twenty of the desired qualities; and the other varieties or breeds in a descending ratio down to our native stock, which may be put as possessing but five of these requisites. The question is, can an animal possessing twenty good points, be improved by one possessing only 10 or 5? We answer yes, if the one possessing 20 is deficient of any of the points possessed by the lowest, or by 5. 20 may be deficient in hardihood or the power of enduring our seasons; in milking properties; adaptation to labor; quality of flesh; or some other point or points, possessed in a remarkable degree by 5; and this deficiency remedied by a skilful cross with 5, which shall engraft and fix the valuable point on 20, would make it 21, or furnish a decided advance towards animal perfection.

The opinions we have advanced in this paper, are not to be considered as mere theory alone; experiment has in a great degree demonstrated their correctness. At our cattle shows, crosses of the improved breeds with our native cattle have been exhibited, which have placed beyond a doubt the possibility of rapidly improving our stock in this way, and by their superior qualities furnishing every incentive to the undertaking. But there must be no breeding downwards; every cross must be upwards both in blood and in desired qualities. We do not say that any animals have yet been produced equal to the finest of the improved breeds, but we believe some might be pointed out that would not suffer materially in a comparison with a great majority of our imported animals, for all the ordinary purposes of the farmer.

Believing as we do, that it is to skilful crossing of the improved pure stocks with our best native animals we are to look for the earliest as well as the permanent improvement of our herds, and the building up of an American breed worthy of the name, the importance of introducing and preserving animals which shall serve as the basis of this improvement, forces itself upon us at once. It is to the pure blood stock already among us, or which may be introduced, that we must mainly look; and every precaution should be used by the breeders of such stock, and every effort used not only to keep them pure, but to provide for their further advance by skilful breeding, and by the infusion of new blood occasionally, to prevent the enfeebling and degenerating effects of too close breeding. The breeders of improved stock can scarcely attach too much importance to pedidree, as in that alone have they proof of the endurance of the valuable qualities of the animals they breed; and the confidence of the public once shaken on that point, or any deception practiced, will be most unfortunate, as seriously tending to check the improvement of domestic stock. Men who do not look at the subject in all its bearings, are sometimes heard to complain of the prices paid for imported or improved animals, and denounce all efforts at improvement as speculation or mere money making.—We, on the contrary, view the improvement of our domestic stock of all kinds, as an affair of national importance, and think the public spirited individuals engaged in the business are richly deserving the approval and the thanks of the agricultural public. If they are well paid for their labors in the cause of improvement, we shall rejoice at it most sincerely; but we have yet to learn that any American breeder has found his purse grow inconveniently heavy, in consequence of his cattle sales. The men who add as efficiently to the national wealth as they do, are, to say the least, entitled to their share.

Albany Cultivator.

*In the dairy of 25 cows the product per cow was 561 lbs. of butter and cheese; and of the dairy of 12 cows the product per head was 533½ lbs. In both cases the cows had pasture and hay only.

INCREASING THE MILK OF COWS.—Gentle treatment and rapid and close milking, says the American Agriculturist, will tend to the greatest development of the milk in cows, and the contrary practices will have the effect of materially reducing the quantity.

THE MILK CELLARS.

A correspondent of the Farmer's Cabinet gives some important ideas on the advantages of good cellars for making butter. He considers cellars properly constructed, altogether preferable to spring houses. His remarks are founded on good sense and sound philosophy. Mr. Miller, the writer, lives in the vicinity of Philadelphia market, which shows as much perfect butter perhaps as any other market in the Union. His ideas are the result of the practice which has prevailed in that vicinity until it has become a distinct species, called Cellar Butter, and always commands the highest price. All dairymen and farmers would do well to construct cellars in conformity to the plan given by Mr. Miller, who says,

THE MILK CELLAR.

It is a curious fact, but by no means unaccountable, that in many parts of the country the milk *cellar* is superceding the *spring house*—an appendage that has always been considered indispensable for the production of good butter, be the other qualifications of a farm and its appurtenances what they might. While on a visit to Wilmington, Delaware, I had occasion to remark the excellence of the butter at my friend's table, when he replied he always selected the best cellar butter at market, for the use of his family, giving it as his firm conviction, that butter made in a cellar was far preferable to that made in a spring house, its great recommendation being, in keeping sweet and good much longer, and retaining its fine flavor and color to the last, which spring house butter would not do. And he observed, it is customary to account for the greater price which some dairymen obtain for their butter in the market, by saying it is *cellar butter;* instancing the fact, in the high character of that made by Mr. Bryan Jackson, near Newcastle, who never fails to obtain the top price of the market for butter of the finest quality; he having a cellar that might be taken as a pattern for all that part of the country. Of course, it is readily admitted that much depends on the mode that is adopted in the management of the dairy, commencing with the breed and feed of the cows, and ending with the manipulations of the butter; but the idea is gaining ground, that the best butter is to be made in a cellar, all other circumstances being equal; a remarkable revolution in public opinion truly.

On reconnoitering amongst my friends, I found that several of them had substituted the cellar for the spring house; and I do not know one who is not satisfied with the arrangement, except it be where the cellar is dug in a damp soil, or has been most injudiciously opened to the well, the evaporation from which fills the room with constant moisture, which may be found adhering to the walls, the ceiling and the wood-work, the shelves, and particularly the inside of the door, causing a damp and clammy feel, and a nauseous, mouldy smell, which the butter imbibes, to its lasting injury: indeed no good butter can be made in such places. But another revolution is taking place, even among the advocates for the cellar: it is no longer thought necessary to dig the cellar very deep, or to arch it over with stone or brick, with an air passage through it for ventilation—a *vault* as it is more properly then termed; it is found sufficient, if the cellar be sunk a few feet below the surface of the earth, with a wide and shallow window on each side, the bottom of it level with the ground outside; well protected with a wire guard to keep out vermin, large flies, &c., and provided with a close glazed sash, which can be opened and closed at pleasure, by lifting it up to the *ceiling*, which ought to be no higher than the top of the windows, so that the air of the cellar can be ventilated by opening the windows of the opposite sides, according to the way the wind sets at the time, shutting them quickly when necessery; for in cold, windy or damp weather, the sooner the windows are again closed the better. Indeed, to the management of the cellar in this particular, much of the success of dairying is to be attributed; cold and damp air being unfriendly to the secretion of cream, and its proper and entire separation from the milk. Hence, therefore, it is a bad practice to set the pans on the brick floor of the cellar; they ought always to be placed around on shelves, about three feet in height, and these, after being well washed with hot water, should be wiped quite dry, that no mouldy evaporation might take place to spoil the butter. The air near the floor of a dairy is always impure, being loaded with acid vapors and putrid exhalations, the density of which confines it to the lowest part of the room; hence it is, that the doors of some dairies are made with lattice work, that the air near the floor, as well as that near the ceiling, might be ventilated at the same time; these lattices being furnished with sliding pannels to be kept closed in bad weather. The milk cellar ought always to have a northern aspect, and be well shaded by trees, not growing too near the windows, so as to impede a dry current of air, or to create a moist atmosphere; this consideration being of more importance than would readily be imagined.

Cellars thus constructed and carefully attended, will, no doubt, supersede the use of spring houses generally, before many years have passed away, by which the business of the dairy will be rendered more agreeable, less laborious, and far less inimical to the health of those, particularly the females, whose occupation it is to attend to its never ceasing duties.

T. MILLER.

Delaware, June 13th, 1843.

ACID IN WOOD—ITS EFFECTS ON SALT AND BUTTER.—It has been frequently remarked by those who are in the habit of packing butter, that it kept best put down in stone; the next best is oak or white ash firkins, the wood of which had been boiled for several hours previous to working; and that butter packed in firkins of unprepared wood frequently acquire a strong and disagreeable flavor, which seriously injures it. The reason of this has not been generally understood. Mr. Moir of Scotland, has been instituting a series of experiments on the subject, which appear to have thrown some light on the matter. He found that most kinds of wood contained considerable quantities of pyrolignic acid, which decomposes the salt with which it comes in contact. The Linden or Basswood was the only wood he found entirely free, but the other kinds he experimented upon, were easily freed from the acid by boiling three or four hours, well pressed under water. It is evident that firkins made of staves prepared in this way, would be decidedly improved, and as the preservation of butter in a sweet and pure state is an important matter to the dairy man, we think much would be gained by a proper attention to vessels in which it is packed.—*Sat. Courier.*

CONVENTION OF BREEDERS.

(CIRCULAR.)

ALBANY, June, 1843.

The State Agricultural Society of New York, desirous that some fixed principles should be established as the basis of excellence in the various descriptions of farm stock, (without reference to their *relative* merits as breeds,) have appointed the undersigned a committee with instructions to call the particular attention of breeders throughout the States, to the importance of the subject, and to make the necessary arrangements for a Convention to be held at the Library Room of the American Institute, in the city of New York, during its 16th annual Fair, in the month of October next, the day to be hereafter noticed; at which breeders of stock and those interested in Agriculture, are respectfully urged to give their attendance, with a view to a full discussion of those forms, qualities and properties which most conduce to intrinsic value; and also that the distinctive characteristics of each separate breed may be as closely defined as possible.

The Society believe that the decision of such a meeting will offer to the agriculturist the best information that can, at present be elicited; and which they trust may be so satisfactory to the mind of every intelligent breeder, as to lead to greater uniformity of action and opinion, and *possibly* become a standard with them by which to judge and be judged, in all cases of competition.

With these views of the subject, the committee hope you may deem it of sufficient importance to be present at the proposed Convention, and lend to its discussions the aid of your experience and talents.

The committee will be obliged by any suggestions, in the interim, you may consider of sufficient importance to be communicated to them in relation to this subject.

FRANCIS ROTCH, C. N. BEMENT,
E. P. PRENTICE, GEORGE VAIL,
LEWIS F. ALLEN.

☞Editors of the several agricultural papers in the United States are requested to publish or notice the above.

COLIC IN THE HORSE.

To the Editors of teh Albany Cultivator:

In your number for May, I notice an article on "Colic in the Horse," and it gives me much pleasure to be able to concur with you most fully in regard to the severity and danger of the disease; and for the most part also in the treatment, which, so far as it goes, is in every respect unexceptionable; and I think it not improbable that when resorted to in proper season, will, as Mr. Stewart believes, succeed in eight cases out of nine.

The ninth horse, however, ought to be saved if possible, and I as freely believe that this last object may be attained in *every true* case of colic, as that the first eight will be saved by the remedies proposed. I cannot agree with you that the first object in the treatment is to arrest the fermentation, or that this is a primary cause of colic, believing it to be only one of the consequences. However this may be, I would rather say that the first object is to allay the pain—to relieve that excruciating agony which is, I apprehend, the very first morbid change which takes place in colic, and which being suspended, all other morbid phenomena subside of course, unless disorganization of the intestines has already taken place. This object can always be attained by the proper use of opium—exhibited either alone or in combination with the stimulants advised by Mr. Stewart. The last, however, I should think might be essential when there are evident symptoms of exhaustion and prostration of strength.

In cases of much severity, two ounces of a saturated tincture of opium, (laudanum,) may be given every half hour, till the pain is relieved, and if the symptoms are peculiarly distressing, three ounces may be given once in twenty minutes.

If the belly is distended and very hard, a moderate bleeding may be conjoined with this treatment with advantage.

I have known 8 ounces of laudanum administered in two hours, with perfect relief in a case of great severity, when all other remedies had failed of even mitigating the symptoms.

Very respectfully, H. WATSON.

East Windsor, 1843.

The following toast, given at Nashville on the Fourth of July, is an exception to the general character of the toasts reported this year:

By John Fitzsimmons. *Washington*—Providence left him childless, that the Nation might call him Father.

☞Burke once mentioned to Fox that he had written a tragedy. "Did you let Garrick see it?" inquired his friend. "No," replied Burke, "I indeed had the folly to write it, but the wit to keep it to myself."

INSTRUCTION IN AGRICULTURE.

The extract which we give below, says the Louisville Journal, from F. H. Burrows' report to the Legislature of Pennsylvania, has an important bearing upon agricultural instruction. It is a plan which contemplates permanent schools and professional teachers. These may be educated men, able to give instructions in the various scenes connected with agriculture and horticulture in a practical manner, using the ground they occupy for illustration and experiment:

TEACHERS' HOUSES AND LOTS.—There are as yet few teachers' houses provided by the districts. But the system will not be complete nor the profession of teaching permanent till they are possessed.

The teacher is now a wanderer. He engages for a month, a quarter or a half year in one neighborhood, and next season is perhaps found a hundred miles off, in pursuit of his precarious subsistence. * * * *

By this itinerant life, he either soon becomes disgusted with his profession and leaves it the first opportunity, or loses his hope and his energy; and with him sinks the respectability of the profession. There are, it is true, many and bright exceptions, but it is at the general rule and not the exception that we are to look.

In addition to the stability of increased usefulness which a permanent and comfortable residence for the teacher will produce, it will also be a great saving to the districts. A teacher provided with a comfortable house and garden for the whole year, will certainly demand less for his services than he who is obliged to board out or rent. Being comfortably placed for the year, he will be induced to open a private school, after the termination of free teaching, (in districts where the public schools can be sustained but part of the year,) and thus be found at his post when the district school re-opens for the next season, and will be enabled to teach for less than if he were obliged either to move his family every six months or be out of employment half his time.

The subject of teachers' houses is here introduced to bring it to the notice of directors, especially in new counties where land is cheap. They will find it to be very much to their future advantage, if they now, in providing school lots, procure them of sufficient size for a teacher's house and garden, in addition to the school house and play ground.

The following, from Beard's travels in Northern Europe, says the Journal, show that the plan which Mr. Burrows proposes has been tried, and is no longer to be considered an experiment If this succeeds in Denmark and Norway, where the greatest economy in education, as in everything else, is required, it certainly could be adopted with equal success here.—Could houses and grounds be furnished teachers, the great obstacle to making teaching a profession would be removed, and the interests of scientific agriculture and public instruction would be closely united. It is perfectly plain that, until this profession be established, educated men, those only who can give agricultural instruction, will not engage permanently in teaching. Concerning the schools of Dermark, Mr. Beard says:

"The stranger who journeys in this country cannot avoid being struck with the great number of schools which he sees as he passes from village to village. The parishes are required to pay the salaries of the teachers. This is done in a variety of ways. In the first place, almost every school has adjoining to it, or at least not far from it, the house of the teacher, together with a few acres of ground which belong to it, and of which the teacher has the occupancy as a part of his wages. In the next place he receives a certain quantity of grain and other productions from the parish, also as part of his salary. In the third place he receives some money, but in general not a very considerable sum; for the wages of teachers are low in this country where living is cheap, and where salaries of all kinds are not great. As a general thing they pursue the business for life; and certainly no men render more important services to the State than those of them who are capable and faithful."

Again, in reference to the schools in Norway, he says—

"The salaries of the rectors, as the schoolmasters are called, vary much, according to the different circumstances of the country. Usually each school district has a house for the teacher adjoining the school; and, in addition to his salary in money, pays him in kind or nature, as it is termed, a portion of the productions of the ground or other means of their wealth. In general the teachers are enabled, from their various incomes, to live with a good degree of comfort."

TO YOUNG MEN—FARMERS' SONS.

In addressing this class of readers, I wish to lay aside the dignity of the editor, and come among you as one of your own number. For I too am a young man, and a farmer's son; and *I know from experience* what disadvantages you labor under in the pursuit of knowledge, and what numereus discouragements you meet in your efforts for intellectual improvement. But I also know, that if you have the *will* you can succeed in making great attainments; and I know, too, that there is a great work for you to do, and great things will be expected of you.—Immense responsibilities rest upon you, as those who are about to assume the management of our much-abused farms—as those to whom the community must look for that reform in our practice of agriculture which is so imperiously demanded at the present time. It begins to be plainly seen that it will not do for you to follow in the beaten tracts of your fathers, and content yourselves with doing as they have done. They received their lands at low prices, fresh from the hand of God, abounding with fertility, and producing plentiful crops with little skill or labor; while the absence of western competition enabled them to obtain a ready market for all their surplus; and their simpler habits and fewer wants, rendered it less difficult for them to attain respectability and happiness in their profession. But how different is your situation! You obtain your lands at high prices, and many of them so impoverished by a long course of bad culture, that the staple productions are greatly diminished; or the fields are so filled with noxious weeds, that a double amount of labor is necessary to obtain even a scanty crop. While the competition from the vast West is so great and increasing, that prices must be very low.

It is affirmed by some, that the wheat crop of Western New York has diminished, in the average yield per acre, one quarter, or 25 per cent, in ten years! How long will it be, at this rate, before our great staple will not half pay for the labor required to produce it? Do you say this cannot be helped—that it is impossible to keep up the wheat-growing capabilities of our soil? No such thing. *It is possible*—yes, and easy too, not only to keep it up, but to increase it; if we will only accept the aid which science offers.—Look at what has been done in Great Britain. With soil not equal to ours by nature, and a less favorable climate, in districts where science has been combined with intelligent industry, the wheat crop has steadily increased in yield, at as rapid a rate as ours has decreased; so that forty to fifty bushels per acre are now frequently obtained, where at one time, with as much labor, the yield was only half that quantity.

But you will ask, "How are *we* to obtain this knowledge? We have only a plain school education, and are obliged to devote nearly all our time to labor. Scientific learning belongs to colleges, and those who are not obliged to work for a living." Here again is a great mistake, and one which the *Cannot* family are very apt to fall into. I unhesitatingly affirm, that there is scarcely a young man in Western New York, of ordinary intellect, who cannot, if he has the *desire*, make himself familiar with all the most important sciences connected with agriculture. Within a few years past, so many excellent and cheap books have been published, in which both theory and practice are explained so that all who read them can understand, that there is no longer any good excuse for remaining in ignorance. It is true there is one thing greatly needed in this country, which is not yet supplied; but, if young men will make their wishes known, it soon will be. We mean an Experimental School of Agriculture. To those who could devote a year or two to the subject, such an institution would be of more benefit than many years of reading. Let none delay, however, and let none repine because they are obliged to labor: to labor is noble—yea, is a blessing. Only make good use of the time you have, and of the powers God has given you, and you can rise above all difficulties, and will find the profession of agriculture afford you more true enjoyment than you now conceive possible.—*New Genesee Farmer.*

LIME A STIMULANT.—Admitting to the fullest extent, all that has been advanced by way of eulogium, in the use of lime as a fertilizer, a neutralizer and a sweetener, I have been accustomed to view it in another light, which has with me, the sanction of experience. I find it the strongest of all stimulants, rendering what was sluggish and inert quick and volatile, producing a vigor of growth in the plant often astonishing. And I have compared this result to the stimulating effects of ardent spirit upon the human frame, which is sure to bring out all the vigor that is in it, enabling it to perform prodigious labor, and sustain, for a while, the greatest bodily exertion. But, unfortunately, the parallel holds still further, for like it, the effects are but momentary, and when the unnatural stimulus is expended, a lassitude is felt in exact proportion to the excitement that had been administered. An this is a law of nature which must be obeyed, before an equilibrium can again be brought about.

Now, reasoning from analogy, must not the same deleterious effects that are observable in the man addicted to the use of ardent spirit, follow a too copious use of lime in the soil?—And does not this consideration account for the fact, that in Devonshire, where far more lime is used than in any other part of England, the average produce of grain is much lower than on any other of their soils of very inferior natural quality? It would therefore appear, by parity of reasoning, that lime should be followed by something for it to feed on, namely, barn yard or other substantial manures, that add staple to the soil, and counteract the too stimulating effects of an overdose of lime; an article better calculated to produce grass than grain. A man accustomed to take alcohol on an empty stomach, soon finds himself in a woeful state of exhaustion, quite unable to sustain even a moderate share of exertion for any considerable length of time—would it be allowable to apply the same mode of reasoning to the system of liming to excess?

It is asked, with much deference, what would be the results of an extra pulverization and thorough working of the soil, by fallowing on proper occasions? Would the system operate precisely in the way in which lime is said to act, in sweetening the soil, neutralizing its acidity, and adding to its fertility, by repeatedly exposing it to the action of the air and rain, and the influence of the sun—effects, which it is averred, would be found of the most lasting benefit, and causing an evenness and regularity in the crop, so necessary to its full developement.

R. D.

Farmers' Cabinet.

WHEAT DOES TURN TO CHESS.

To the Editor of the Prairie Farmer—

I saw in your third number, a communication saying that wheat does not turn to chess.—I must disagree with the writer of the article. Some five years since I saw by the side of the fence a bunch of wheat and chess growing together. I had the curiosity to pull it up, and after washing the roots clean I examined the root, and found only one main root, from which shot up five stalks, two bearing wheat heads upon them and the other three chess. This was exhibited to hundreds, who all gave in that wheat and chess spring from the same root, or at least that wheat turned to chess. Where I found this it had the appearance of having been bitten off by something, at which place there seemed to be a large quantity of chess, while the other part of the wheat was clear from it. From this I am led to believe that where wheat has got so far advanced as to form the stalk and the stalk is then destroyed, it will grow up chess.

P. SWEAT.

Peoria, Il., March 17, 1842.

WHEAT AND CHESS.—As the question whether wheat becomes chess is a matter of vigorous debate, pro and con, we give the result of an experiment made by Newton Crawford, Esq., of Winnebago county, several years ago, and detailed to us by him. He had a piece of ground, on which no wheat had been grown, which he could flood at pleasure. He made three beds, which he sowed with perfectly clean wheat, selecting the seed by hand, one by one. One bed he let entirely alone after sowing; another he flooded with water, letting it off when he found it likely to draw out the wheat, and continued to do so all the spring and early part of summer. The third bed he fed down with some pet sheep, and continued to do so frequently, taking care to let them trample it down as much as possible. The result was, that the two beds whose growth he retarded by water and feeding, produced but little wheat, and some of it but half ripe: but the production of the three beds, as far as there was any production at all, was wheat, and wheat only—not a spire of chess appearing in the whole.

This experiment is only of a negative character, 'tis true: still, as those who believe wheat turns to chess allege that flooding and breaking the stalks are the principal agencies by which the change is effected, there is a pertinency in the experiment as far as it goes.—*Prairie Farm.*

CHARCOAL AS A FERTILIZER.—We have been astonished at the enormous increase of the wheat crop in France within the last eight or ten years, and have devoted some attention to the investigation of the subject. It appears that charcoal—an article that can be obtained here for a tithe of its cost in France—has been extensively used, and with marked effect, in fertilizing the wheat lands of that kingdom. A correspondent of the New Farmers' Journal, an English print, states that during a sojourn in one of the central departments of France, he learned that some of the most productive farms were originally very sterile; but that for a number of years their proprietors had given them a light dressing of charcoal, which had resulted in a large yield of wheat of an excellent quality. Since his return to England he has tried the experiment upon his own lands, with the same happy effect. The charcoal should be well pulverized and sown like lime, after a rain or in a still damp day. Even in England, the writer says, "the expense is a mere trifle, in comparison with the permanent improvement effected, which on grass is truly wonderful." He states one other very important result from its liberal use. "I am quite satisfied that by using charcoal in the way described, *rust in wheat will be entirely prevented*; for I have found in two adjoining fields, one of which was coaled, and the other manured with farm yard dung, the latter was greatly injured by rust, while that growing in the other was perfectly free from it.

Buffalo Com. Advertiser.

To the Editor of the American Farmer—

I should like you to give your reasons why you prefer that grasses should be mowed as soon as they are in *flower*. Our experience suggests that cutting should be delayed until it is so near ripe as not to scatter. Our grass is the "herds," or as it is called with you, the "red top."

Yours, very respectfully, H. A. L.

Pittsboro', N. C., July 5, 1842.

Reply by the Editor of the Farmer.—In reply to the inquiry of our correspondent, we have to state that our reasons are two-fold—*first*, that cattle relish the grass better, and *secondly*, that the soil continues longer in heart, inasmuch as prior to the formation of the seed a larger portion of the nutriment of the plant is derived from the *atmosphere*, whereas, after the commencement of the development of the seed, the major portion of the sustenance is abstracted from the soil, thus depriving it of its fertility without contributing to quantity in the weight of the hay. It is fair, however, to state that grass cut after the seed is ripe, or partially so, is more nutritious than that which is cut when just in flower.

SPURREY FOR SANDY SOILS.

This is a plant which is cultivated to a great extent in Denmark and Flanders, on the poorest sands. It is considered there as the most profitable crop that can be grown on very thin soil. Von Voght says: "It is better than red or white clover; the cows give more and better milk when fed on it, and it improves the land in an extraordinary degree. If the land is to lie several years in pasture, white clover must be sown with it. When sown in the middle of April, it is ripe for pasture by the end of May. If eaten off in June, the land is turned flat and another crop is sown, which affords fine pasture in August and September. This operation is equivalent to a dressing of ten loads of manure per acre. The blessing of spurrey, *the clover of sandy lands*, is incredible when rightly employed."

It is used as hay as well as for pasture, and is eaten greedily by sheep. The reeds are rich and highly nutritious for all kinds of stock, and afford, when expressed, a valuable oil. We think our poorest sandy soils, such as are to be found on our Atlantic coast, which are not rich enough for clover, would be admirably adapted to this crop, and its introduction might be the means of affording a profitable rotation with rye, and eventually produce, with judicious management, an entire renovation of extensive tracts, of what is now almost entirely waste land. Schwartz, who is esteemed high authority in Germany, says, "without spurrey, the Campine (Kempenlane, a district in Dutch Brabant,) *the best cultivated soil in the world*, would still have been a desert. It requires no manure for itself, and even when mown, by the residue it leaves, it gives back more than it takes from the soil; and except for seed, it requires no preparation, and it will grow where no other crop, except rye, will live." Will some of our enterprising and intelligent farmers, having land adapted to this crop, give the experiment a thorough trial? R. L. A.

American Agriculturist

EFFECTS OF SOAPSUDS ON CABBAGES.—I believe it will be a thankless piece of service for one gardener to teach another how to grow cabbages and cauliflowers, yet as these crops of vegetables have failed this season in various parts of the country, the following notice may perhaps be of use to our cottage readers.—Wherever soapsuds have been used plentifully, cabbages and cauliflowers have grown luxuriantly. I have made several inquiries of others who have used them, and in no one instance have I heard of a failure where soapsuds have been applied. I intend to try them over brocoli, to see if they will prevent them from clubbing. Others may do so likewise and make known the results. Whether the alkali in the water has prevented the enemy from destroying the roots, and given the roots more vigor to resist the attack, I do not know; but one thing is certain—where such matter has been applied, it has produced the most beneficial results. I think cottagers may take a lesson from this, and save that which would nourish their languishing crop, for it is a pity to see a pool of filthy water polluting the neighborhood with its stench, while within a few yards of it, the vegetables of a garden are dying of starvation.—*Gardner's Chron.*

THE FARM.

The farm is the home and the abiding place of the husbandman and his family. It is there all their social and domestic comforts and happiness are sought and enjoyed. It is there they unite their sympaties, their property and individual efforts, in common stock. By the proper application of their mental and physical powers, they can convert the farm into an earthly paradise. They can impart to it a neatness, fertility and rural beauty, which will endear it to them, above every other spot on the face of the earth, that they may emphatically call it "Home, sweet Home."

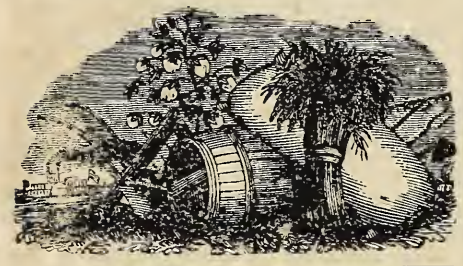
The farm which furnishes full scope for all the mental and physical energies of the owner for a long time, will in some measure become the true index of his moral, intellectual and physical character; the living epistle of his life and labors, and in no department of the establishment do these traits of character appear so conspicuous and beautiful, as in that necessary appendage, the well cultivated garden.

Horticulture is the perfection and refinement of agriculture in miniature. It was the first employment which the Creator assigned to man, while in a state of innocence. With a delightful climate, a rich and fertile soil, Eden no doubt abounded in fruits, vegetables and flowers, "inexhaustible in variety, beautiful in form, splendid in color," delicious to the taste, charming to the sight, and grateful to the smell—exciting the most pleasureable emotions in all the senses. For "there out of the ground the Lord God made to grow every tree that is pleasant to the sight, and good for food." All these delicate and exquisite pieces of workmanship were planted by God to adorn and beautify the garden assigned to Adam and Eve for a home, during their long sojourn on the earth; and were expressly calculated to produce in their minds the most exalted and sublime conceptions of the wisdom and goodness of their Creator. The structure, habits, character and usefulness of the vegetable world, the manner and means by which this wonderful combination of beauty and elegance are produced, afforded them a delightful subject for contemplation and study.—The simple process of fluid circulation, which by the influence of heat, light and moisture, gives all the variety of form, and size, and tint, and splendid dyes, that beautify and adorn the vegetable world.

> "Such beauty and beneficence combined,
> Shade unperceived, so softening into shade,
> And all so forming an harmonious whole,
> That as they still succeed, they ravish still."

The very name EDEN signifies pleasure, and no doubt God selected it as the most delightful plat for a garden, for a home! on the face of the earth; so that Adam first opened his eyes upon a most exquisite assemblage of beauty, in the variety of vegetables, fruits and flowers, in which he found himself enveloped. It was his home! A scene too fascinating, too tempting for frail humanity to withstand! It was to the garden, the sweet and sacred retirement of a rich and fertile garden, that the Savior of the world frequently resorted with his disciples, for solemn and devout meditations, and religious conversation and exercises. It was the only place in the immediate vicinity of Jerusalem, of which we know, that we find him familiarly frequenting as his home. It was there he went to contemplate the solemn hour of his sacrifice and suffering. It was there we find him giving utterance to his agonizing prayer in view of his approaching crucifixion. It was a spot which he had probably contributed to improve and

beautify by the labors of his own divine hands. —But independent of these hallowed associations, the garden and gardening possess many attractions for physical and intellectual man. It tends to promote bodily health, cheerfulness of mind, good morals, chastened affections and refined taste, so that a farmer's house without a well cultivated garden, seems destitute of the most delightful appendage of the Christian's Home; for among all the employments and enjoyments of the Farm, none creates and strengthens domestic attachments so much as this. —*Conn. Farmer's Gazette.*



WEDNESDAY, AUGUST 16, 1843.

BACK NUMBERS.—All new subscribers to the "Southern Cultivator" can be supplied with the back numbers.

☞The prevalence of the INFLUENZA among the hands in our office, must excuse us to our patrons for the delay in issuing this number of the "Cultivator."

ERRATA.—In the communication of Dr. CLOUD, in the "Southern Cultivator" of the 2d inst., two errors occurred which we deem it necessary to correct, viz:—In the top line of the 3d column, after the word "*accomplished*" the point should be a comma or dash, instead of a period. In the 5th line from the bottom in the postscript, read "*attained*" for "*attained.*"

A FINE BERKSHIRE PIG.

The subjoined letter from our friend Colonel JOHN. BONNER, is sufficiently explicit, and we merely give it a place to make a suitable acknowledgement for his courtesy, and to thank him most sincerely for the pig, which it describes most graphically. He reached his destination safely, and, we beg leave to assure our friend, answers our highest expectations of the produce of "ONTARIO" and "LADY HUTTLESON," both of whom we saw on their passage through this city. And as a mark of respect to our friend, as well as our anxiety to possess a superior Berkshire from stock so approved, every possible attention shall be bestowed on him, to make him all that his distinguished parentage will justify a hope for.

WHITE PLAINS, July 29, 1843.

GENTLEMEN—I have this day caged and sent you a fine Berkshire pig. He is now two months old, and I think will make a splendid hog, with good treatment. He has several white spots over and about his body, all four feet are white, a small white tip on the end of the tail.—His face is entirely white, with the exception of a small black spot about the size of a cent piece in the forehead, or a little below it. His ears are very erect, and the inside of them show some white, more particularly the left one.

I have been thus particular in describing him, least he might escape on the way. He is out of my imported sow "Lady Huttleson," and by imported "Ontario"—both of which you saw as they passed through your city. He is not large for his age, attributable, no doubt, to many causes:—1st. The voyage to sea of his dam so shortly before pigging; 2d. His dam produced fourteen pigs at that litter; 3d. She did not stand our climate well; and 4th. She gave but little suck for so many pigs. He is, however, a *Berkshire*, every *inch* of him, the opinion of "A Lover of Good Ham" to the contrary notwithstanding.

I have no doubt but if he is well cared for, and not permitted to go to sows at too early an age, that he will fully equal his sire in every respect.

My stock are now doing well, and I am selling all the pigs I can raise. "Ontario" has improved greatly since his arrival, and, in my feeble estimation, is decidedly the finest formed hog I ever saw.

Hoping that the pig presented you may arrive safe, and ultimately exceed your expectations, is my greatest wish, and with my hearty thanks for your many favors, and a hope that your noble efforts to improve the agriculture of our country may meet its due reward, I remain, as ever, very truly yours, JOHN BONNER.

BOMMER'S MANURE.

In reply to several gentlemen making enquiries as to the source whence information may be obtained as to this method of making manure, we refer them to the advertisement of Messrs. ABBETT & Co. of Baltimore, which we have transferred to our columns. We know of no other agency in the Southern States, and presume there is not another, as we have not seen a notice of any. We would, however, most respectfully suggest to Messrs. A. & Co. the propriety of establishing one in Georgia, for the accommodation of those of our planters who desire to avail themselves of its advantages.—Some of our correspondents have propounded to us many enquiries with regard to the method, as to its cost, whether a man who is not a chemist can use it, and what substances it will convert into manure, &c. &c., none of which can we answer as definitely as we should desire. We have no doubt however that the materials employed are cheap, and can be used by any man who can comprehend the plainest prescription, and we take it for granted it will convert all substances into manure which are usually thus appropriated—even tan bark. In conclusion, we must remark to our correspondents, that they can form as definite conclusions as to its merits as we can, if they have carefully read all the extracts we have copied into the "Southern Cultivator," for we have regarded it a subject of vital importance, and have given them whatever information we could obtain from our exchange papers.

We subjoin a letter from Messrs. Abbett & Co., in reply to the remarks of our correspondent "H.," in which he alludes to Bommer's method. Messrs. A. & Co. will perceive on reference to the communication of "H.," that they have fallen into error as to his data—probably they have been led into it by the typographical error of the paper which copied the article from the "Southern Cultivator." "H." asserted that it would require "1500 to 1800 gallons of water to every 1000 lbs. of straw," and *not* 100 *lbs. of straw* as quoted by Messrs. A. & Co. This fact makes them approximate nearer in their views, but they are evidently yet far apart as to the quantity of water necessary to be used in this process.

BALTIMORE, August 8, 1843.

To the Editor of the Southern Cultivator—

Sir—As the proprietors of the patent right for the "Bommer Manure Method," an extract has been shown to us, copied from your paper, in which a correspondent of yours, signing himself "H.," states that "the method requires from 1500 to 1800 gallons of water to every 1000 lbs. of straw."

As your correspondent evidently makes a "right," we think that it will be easy to convince him that in this respect he has fallen into error.

In the first place he will acknowledge that the great bulk of water which is used is retained in the heap; that great care is taken to prevent loss either by filtration or evaporation; that if it is not retained in the form of water, the elements into which it is decomposed must still remain there in some other form, and whatever form these elements may assume, their aggregate weight will detect the amount of water which the heap has absorbed and decomposed.

Now we have the testimony of the N. York State Agricultural Society, that the straw undergoing this process quadruples its weight, and assuming water to weigh about 8 lbs. to the gallon, (near enough for our present purpose,) we have some data upon which to found an estimate of the amount of water consumed in the Bommer process.

Thus 100 lbs. of straw produces 400 lbs. manure, having increased in the process 300 lbs., which at 8 lbs. per gallon is equivalent to 37½ gallons, which must be very near the amount absorbed.

Our own opinion is, that the straw more than quadruples its weight, but that it cannot quintuple it *from water*, is evidenced by the fact that the utmost absorbent capacity of 100 lbs straw in water is 43 gallons 3 quarts, which your correspondent will find by actual experiment.

Very respectfully your ob't. serv'ts.
ABBETT & Co.

AGRICULTURAL SOCIETIES.

It is a source of no ordinary gratification to us to witness the spirit which seems about to be aroused throughout the country on the subject of Agricultural Societies. It augurs well for the cause of improvement in this important branch of industry, and foretells with unerring truth the future prosperity of our country and its whole people.

The following proceedings at Eufaula, Barbour county, Ala., speak a language not to be mistaken, and exhibit a most laudable spirit in that young and prosperous country. Read, then, Georgians, and profit by the worthy example of your neighbors and brethren.

The Barbour County Agricultural Society met by order of a call from the President, at Eufaula, on 1st July, Maj. Snipes in the chair.

The object of the meeting was succinctly stated by Col. McDonald.

On motion of Col. Cochran, the following resolutions were adopted:

Resolved, That the Society accede to the proceedings of a meeting held at Glennville, on the —— day of ——, 1843, and cordially receive the members there added into the Society, and agree to have the meetings of the Society alternately at Eufaula and Glennville; and to the change then made in the time and place of holding the next meeting.

Resolved, That the Executive Committee of this Society be, and it is hereby, instructed to proceed to adopt proper means to have an Agricultural Fair some time during the ensuing fall, and report at the next meeting, to be held at Glennville on the 4th Saturday in the present month.

Resolved, That the Society look forward with

great interest to the report of the different Committees of the Society, appointed to examine the crops, as their reports will furnish valuable information to planters.

Resolved, That any gentleman or gentlemen appointed heretofore to examine crops in any particular beat or section of the county, shall be permitted to exchange duties with any gentleman appointed in a different beat or section, and when any one or more shall have been appointed in a section embracing his own crop, an exchange will be expected if practicable.

On motion of Mr. Flournoy, the meeting adjourned to the 22d inst. at Glennville.

A. McDonald, Ch'n.

Pitt Milner Caldaway, Sec'y.

THE ECONOMY OF FARMING.

Just as we were going to press, we received through the mail, from the publisher, a volume of 130 neatly printed octavo pages of the above title, translated from the German of J. Burger, Professor of Agriculture, &c. &c, with additional notes from several distinguished German professors, by E. Goodrich Smith. The late hour at which we have received it, precludes a detailed notice of its merits, and we therefore avail ourself of the testimonial of the Hon. H. L. Ellsworth, than whom no one is perhaps more capable of determining.

Patent Office, June 21, 1843.

Having advised the Rev. E. G. Smith to undertake the translation of a portion of Burger's Manual of Land-Husbandry, a text book in the schools and agricultural institutions in Germany, I take the earliest opportunity to commend the work to the American public. I have perused many of the pages, prepared for the press, and feel satisfied with the correctness of the translation, since the same has been submitted to a German scholar and agriculturist, Mr. Fleischmann.

There will be found, in this publication, many details and accurate experiments which the patience and zeal of the Germans have secured. This manual gives the precise information needed in this country, where theory is so often substituted for practice, and where large statements of products are given with so few items of expenditure, as taxes, oftentimes, the credulity of readers. With this manual in hand, enriched by numerous quotations from other writers, the youth of our country will grow up with accurate information on the great subjects connected with the profession. * * * *

Henry L. Ellsworth.

This is the first of what is intended to be a series of translations of Agricultural works, if the author is sufficiently encouraged. Price 50 cents.

Robertville, S. C., August 10, 1843.

Mr. Editor—I have a valuable horse, which, owing to a morbid state of the system, has been very much injured by eating dirt, whenever he can get it. Salt is kept by him, salted water is daily sprinkled over his food, poplar bark has been repeatedly given, also sassafras tea, but every thing has failed to do any good. Can you, or any of the correspondents of your valuable paper, furnish me with a remedy for this disease? A Subscriber.

We confess our inability to suggest a remedy for this singular affection of the horse of "A Subscriber." It evinces a morbidness of the stomach which we have never seen noticed before, and we give his letter to our readers with the hope that some one may suggest an efficient remedy.

AGRICULTURAL FAIRS.

Below we give a list of premiums offered by the Agricultural Society of Morgan, to be distributed at their Fair in 1844. It is a small beginning but a noble one, and we are taught by high authority "to despise not the day of small things." In our next we shall give a list of premiums offered by the Monroe Agricultural Society.

The managers of the Morgan County Agricultural Society offer the following premiums, to be awarded during the year 1844:

For the best acre of	Wheat		$3 00
" " "	Corn		3 00
" " "	Cotton		2 00
" " "	Oats		2 00
" "	Fourth of an acre of Sweet Potatoes		2 00
" "	Specimen of Ditching, for preserving hilly or rolling land		5 00
" "	Colt under 2 years old		3 00
" "	Milch Cow		3 00
" "	Bull		3 00
" "	Bull Calf under 2 years		2 00
" "	Heifer " "		2 00
" "	Boar and Sow under 2 years, each		2 00
" "	Piece of Domestic Cloth, 8 yards, for gentlemen's winter wear		3 00
" "	8 to 10 yds for a lady's dress		3 00
" "	Counterpane or Coverlid		2 00
" "	Specimen of Domestic Carpeting		1 00
" "	Specimen of Knitting		1 00

CURE FOR BOTS.

A writer in the Columbia (S. C.) Planter gives the following remedy for bots:—"As soon as symptoms of bots appear, raise the upper lip of the horse, and with the sharp point of a knife, scarify the inner coat of the lip (beginning at the top) making a number of slight gashes, transversely, causing it to bleed slightly. A case has never come under my own observation, (and I have cured many,) in which this simple mode of treatment did not succeed instantly. The most violent paroxysms will be relieved in five minutes. What connexion or sympathy there may be between the lip and maw, I leave to the curious and learned to decide.

WORK FOR AUGUST.

We have availed ourself of the labors of our brethren of the "American Farmer" and a correspondent of the "American Agriculturist," for the following calendar for August.

Briars, Bushes, Weeds and Shrubs.—If your fields, pastures, meadows or fence sides are infested with any of these enemies of cleanly culture, be sure to have them cut down this month, put in piles, and as soon as dry enough, have them burnt.

Draining and Ditching.—This is an excellent month to carry on these operations, and if you have any grounds that you cultivate, which may be too retentive of water, have them relieved by these means, as you may rest assured that by such relief you will add fully twenty-five per cent to their value, besides making them much easier to work.

Potatoes.—If you have not already given your late potatoes their last working do so forthwith; and be sure to lay them by clean of weeds, and that the top of the furrows be left as flat as possible.

Fallowing.—Get all your grounds intended for fall grain ploughed up as speedily as possible, taking care to get that alloted for rye ready first, as the earlier in September you get that grain in the better will it be; nor would we be content to sow it without spreading over every acre of the ground a bushel of plaster. With regard to the *time of sowing wheat* we are persuaded that most farmers delay that operation until it is too late. It is our opinion that every one should begin to seed from the 15th to the 20th of September. This would give the wheat plants time to get *well and strongly* rooted in the earth before the freezing of the ground in the fall, and thus serve to prevent the loss by freezing out. The only difficulty to result from early sowing is the fall attack of the Hessian Fly, but we think this may be obviated by watching the plants and rolling when the insect is in its chrysalis state; but even if this should not prove a *remedy*, the advantages to be derived by earlier ripening and consequent avoidance of the rust, would more than compensate for the hazards of the fly in the fall.

Sheep—As this is one of the months in which the fly deposits its eggs in the nostrils of the sheep, which produce the disease called worms in the head, and which destroy so many of these useful animals, we would advise you to avail yourself of a very simple and cheap remedy, one which we have often recommended and will here repeat. It is this: for every sheep, place in a trough, once a week, for five or six weeks, a gill of salt and as much tar. Place the tar on the bottom of the trough and spread the salt over it. In eating the salt the sheep will smear their noses with the tar, and thus secure themselves against the fly, as the aroma of tar is repulsive to his organs of scent. Besides protecting the animals against their insect enemies, the tar will act medicinally, and impart constitutional vigor to your sheep. But unless you intend to repeat the precaution *weekly*, don't attempt it at all, because in its repetition the security of the measure rests, and it would be but a mockery to do it once, and then ascribe its failure to save your sheep to the want of efficacy, when, in fact, your *own* neglect should be wholly chargeable with it. If you undertake to do a thing, do it as it ought to be done, and not by halves and quarters. If it is worthy of being done at all, it is worthy of being well done. We are of this fath: that whether a man be engaged in winning the smiles of a lovely woman, or farming, he should give to the object of his pursuit his whole heart, as nothing less than that should or will answer in either case.

Heifers.—All two year old heifers intended for milch cows should now be *served*, and in selecting a bull have a due regard to the improvement of their progeny. It takes no more to raise a good calf than an indifferent one.

Milch Cows.—When the pastures get thin, provide your cows with good succulent food of some kind, so that they may neither fall off in flesh nor milk.

Barn Yards, Cow Pens and Hog Pens.—Have these covered with loam and leaves from the woods, or mould of any kind, a foot deep, as your stock will convert every cubic foot of it into good manure before next spring. Don't say you have not got time to do it, but resolve that it shall be done, and the possession of the time will be an easy matter. For a farmer to say that he *has not time to provide food* for his crops, is a language which we do not comprehend; and our opinion is, that every man engaged in farming should teach every one about him to forget the meaning of the terms.

Make it a matter of especial attention to have every thing in readiness for picking cotton. It requires only the same time to prepare, and if done in time, you will have no detention. I therefore urge you to examine baskets, sacks, gin stand, gin band, running gear, presses, &c., and if anything requires repairing, do it immediately. Continue your improvements all spare time, such as grubbing, &c.; repairing fences about lots, repairing buildings, making shingles and scaffolds to sun cotton.

Cut crab grass hay, throw into heap-rows, there to remain for a day, then into tall narrow heaps until cured. Clean your potato plantings designed for seed or slips. Gather the fodder

from late corn. Thrash the grain designed for fall sowing, to provide against loss of time from cotton-picking, when the seed will be wanted, and that you may have the straw to pack away with the pea-vines, if you intend to same them.

Prepare turnep ground at once, if not done, a day or two extra work will not be missed 100 years hence, and you will be well paid. Procure Dale's hybrid turnep seed, and sow on the 15th, rain or no rain, Sundays always excepted. Sow half a pint of seed to the acre, any how, though old folks say a tablespoonful is enough; I would rather have a pint cup full. Unless the earth be wet, or decided appearance of rain, I would advise covering by brushing in: the last season taught me this. I had more turneps in half-a-dozen rows, where brushed, than on eight acres' where harrowed in. The ground should be made fine by frequent harrowings and plowings, then a brush rather settles the earth to the seed.

Bud peach-trees of this year's growth, the best if well cultivated. Procure buds from your neighbors, even if at a distance of 10 to 20 miles, to choice fruit; the same labor will grow a tree producing a delicious fruit, as one of those little tasteless hard things too often seen.

About the middle of this month, cotton will have sufficiently ripened and burst its covering, to permit your hands to average some 30 to 50 or 60 lbs. per day. When you can gather this amount get to it; you will save much of that which has opened from rain or injury, by hands passing between rows. Open the branches out to the sun, and a freer circulation of air causing it to open sooner, and not to rot for want of the sun to open it, and you will be the better able to keep up with the opening.

Top cotton early in this month, if not done the last of July.

EXPERIMENTS IN MAKING SUGAR FROM CORN STALKS.

The following, taken from the minutes of the transactions of the French Academy of Science, we copy from the American Farmer.

"At the sittings of this body in September last, a series of reports and researches was submitted by M. M. Biot and Soubeiran, on the subject of making sugar from Indian corn. It seems that, as far back as 1834, M. Pallas placed before the Academy an account of his having extracted two per cent of sugar—entirely like that of the sugar cane—from the stalk of the maize. M. Robiquet again reported upon Pallas' communication, suggesting that the greatest yield of sugar could probably be obtained immediately after the flowering of the plant, and that its quantity would be greatly lessened when the grain began to be completely formed. In 1839, M. Pallas again communicated experiments as to the effect, on the saccharine qualities of maize, of removing the ear at several stages of its growth. Upon this paper Messrs. Bouissingault and Biot again reported, pointing out the defects of M. Pallas' experiments, and indicating the proper method of investigating the matter.

"We give this little sketch of the progress of this conversion of maize to the purpose of furnishing sugar, as interesting to those who, in this country, are prosecuting the same object. Monsieur Biot's last paper is to the following effect:

" 'The stalks upon which they operated were taken from the Jardin des Plantes. Some of them had been separated from their heads, others had not. They report that the sugar of maize is precisely that of the sugar cane, mixed, however, with a small quantity of sugar of fecula. The juice of the maize which had been castrated, contained per litre, 113 grammes, or 12 per cent of sugar; that of the non-castrated gave 124 grammes, or 13 per cent. These experiments prove that castration is rather injurious than otherwise, and that if maize is to be used for the purpose of extracting its sugar, it must be in its normal state. Whether this new industry on an extensive scale would be a profitable one, is a question which, at the present moment, may be matter of dispute; but there is one consideration in its favor, supposing the productiveness of the maize to be such, if cultivated to the necessary extent, as to render the cultivation of the beet root unnecessary. The latter must remain on the ground during the whole of the summer, and the moment of harvest is too near that of the winter sowing for corn, to leave time to prepare the ground for receiving the new seed. Maize, on the contrary, runs through all the phases of vegetation in a few months, and it can be gathered in, as it is not necessary to leave it on the ground until it has attained to full maturity, and sufficiently early to have abundant time to prepare the ground for the winter corn seed. M. Thenard, one of the members of the Academy, alluding to that part of the report of Messrs. Biot and Soubeiran, in which it is stated that there is a small quantity of sugar of fecula mixed with the cane sugar of the maize, observed that the beet root contains crystalizable sugar unmixed with sugar of fecular, and that probably the presence of the latter in the experiments made on maize, was due to the mode of manipulation, and that it does not exist naturally in the plant.' "

GRASSES.

The following are some of the general results of Sinclair's observations:

1. Grasses which have culms with swollen joints, leaves thick and succulent, and flowers with downy husks, contain greater proportions of sugar and mucilage than those of a less succulent nature.

2. When this structure is of a light glaucous color, the sugar is generally in excess.

3. Grasses which have culms with small joints, flowers pointed, collected into a spike-like panicle, leaves thin, flat, rough, and of a light green color, contain a greater proportion of extractive matter than others.

4. Grasses which have culms furnished with numerous joints, leaves smooth and succulent, flowers in a spike or close panicle, florets blunt and large, contain most gluten and mucilage.

5. When this structure is of a glaucous color, and the florets wooly, sugar is in the next proportion to mucilage.

6. Grasses which have their flowers in a panicle, florets pointed or awned, points of the culm smooth and succulent, contain most mucilage and extractive.

7. Grasses with flowers in a panicle, florets thinly scattered, pointed or furnished with long awns, culms lofty, with leaves flat and rough, contain a greater proportion of saline matter and bitter extractive.

8. Grasses with long creeping roots, culms few, leaves flat and rough, flower in a spike, contain a greater proportion of bitter extract with mucilage.

In the first part of April, 1920 grains of the leaves of the following grasses, affording to Sinclair the following proportions of nutritive matter:

Meadow fox tail grass	96 grs.
Tall oat-like soft grass	120
Sweet-scented vernal	52
Round panicled cock's foot	80
Perennial rye grass	70
Tall fescue	94
Meadow fescue	96
Crested dog's tail	88
Creeping soft grass	90
Meadow cat's tail [timothy]	80
Fertile meadow-grass	70
Nerved meadow grass	76
Wood meadow grass	68
Creeping bent	42
Rough stalked meadow grass	80
Broad leaved red clover	80
White or Dutch clover	64
Great bird's foot trefoil	60
Long rooted clover	76
Lucerne	90

The chemical composition of the grasses varies materially in the progress of their growth. "I found," says Davy, "in all the trials I made, the largest quantity of truly nutritive matter when the seed was ripe, and the least bitter extract and saline matter; most extract and saline matter in the autumnal crop, and most saccharine matter in proportion to the other ingredients in the crop cut at the time of flowering."

Johnson's Farmers' Encyclopedia.

The Fort Gaines Whig of the 12th instant, in speaking of the growing crops in that section, says:—Corn crops are now made, and so far as we have been able to learn, they are generally good,—fully an average one. Cotton looks promising, but it is feared the late continued rains may cause it to rot; and we have already heard some farmers complain of its shedding the forms, which will, no doubt, be the case generally, should the wet weather continue much longer. The cotton crop is fully one month later now than of an ordinary year; so that, with circumstances altogether favorable from this time on, we can scarcely look for an average crop.

CONTENTS OF THIS NUMBER.

	PAGE.
Improvement of Domestic Stock	129
Increasing the Milk of Cows	130
The Milk Cellar; Effects of Acid Wood on Salt and Butter; Convention of Breeders; Cholic in the Horse	131
Instruction in Agriculture; Farmer's Sons; Lime a Stimulant	132
Wheat turns to Chess; Wheat and Chess; Charcoal as a Fertilizer; Time for Mowing Grass; Spurrey for Sandy Soils; Effects of Soapsuds on Cabbage; the Farm	133
A Fine Berkshire Pig; Bommer's Manure; Agricultural Societies	134
The Economy of Farming; the Horse, a Dirt Eater; Agricultural Fairs; Cure for Bots; Work for August	135
Corn Stalk Sugar; Grasses	136

THE BOMMER MANURE METHOD,

WHICH teaches how to make vegetable manure without the aid of live stock, in from 15 to 30 days, by a course of humid fermentation set into action at a cost of from 50 cts to $4.

And also to make Compost *in a few days.* And how to make a rich fertilizing liquid called "purin," having all the strength without the acrid qualities of urine.

With the view of graduating the cost to the quantity of land upon which it may be desired to use the method, the following scale of prices has been adopted, viz:

For Gardens of any extent	$6
Farms up to 100 acres	10
" from 100 to 200 acres	15
" " 200 to 300 "	18
" " 300 to 400 "	20
" over 400 acres in any one farm	25

By the remittance of the sum here specified, a copy of the method will be sent by mail or in any other mode proposed by the purchaser.

All letters of inquiry must be post paid.

ABBETT & CO., Baltimore,
Proprietors of the patent right for the Southern and Western States. aug 16

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MANURING, A SCIENCE.

If there is one department of agricultural science more neglected by the practical farmer than another, it is that of manuring. Chemists have made calculation after calculation, experiment after experiment, but all to little or no purpose. The farmer—I mean the working farmer—who is one from necessity, has derived little or no benefit from the host of eminent individuals who have concentrated their whole attention on agricultural chemistry. Why is this? Why is it that the great and all-important discoveries of Davy, are still laughed at by many—but slightly attended to by all; at least by all those who would reap the greatest profit from them? 'Tis true that a wonderful progress has been made in agriculture within the last few years; and much has been done in the improvement of stock, perfection of machinery, &c., but very little in the science of manuring. And the circumstance appears to be still more unaccountable when we call to mind the fact, that there are greater means of improvement in this particular branch of husbandry, than any other; in no other department are the rudiments so well understood and so generally circulated, as in this. We know the constitution of every agricultural plant; we have analyses of every description of soils; we are well versed in the respective compositions of air and water; we have abundant means of ascertaining the constitution of all manures; indeed, we know and perceive all but the peculiar operation of the vital principle, and yet we are daily applying matter to soils in which a sufficiency already exists. Why is all this? Why is it that in some departments agriculture is rapidly advancing—in others, making no perceptible progress? It is unpleasant, and by no means the choice of the writer, to give the cause of this anomaly; but 'facts are stubborn things,' and it becomes no one to conceal the truth.

It is well known that the improvements which have been made in stock, are owing to the exertions of *experimental farmers*, and those who farm for example; independent of which it requires little or no calculation to improve stock; there are no scientific rules to be pursued and committed to memory; it can be accomplished as well by a man of mediocre ability, as by one of a high order of intellectual capacity, provided he has perseverance. It must not be supposed, therefore, that no credit is due to those who have by their exertions improved the breed of any kind of stock. Credit is due to any one who confers the smallest benefit upon his fellow-creatures; but the purpose is to show why our breeds of animals have been so much improved, and another department of husbandry almost totally neglected. The cause, then, is that much in this respect has been done for the agriculturist, and there being little difficulty in what has been accomplished.

With respect to machinery, in which, perhaps, the most extensive as well as the most beneficial results have taken place, it need only be asked, who take the majority of prizes for machinery, at agricultural prize meetings? Not farmers, but machinists. This then speaks for itself; the improvements, the wonderful improvements made in machines, have been brought about by the machine venders, and not by farmers. It is readily admitted that it would be of no avail for machinists, &c., to construct new implements, if the farmer had no disposition to encourage their laudable exertions; still, it must be confessed, that the advance of agriculture in this department, is too little owing to agriculturists themselves.

The *true* signification of the word *science* is, a knowledge of all that *exists*, and of the laws that govern the operations of nature—a knowledge of matter, things and systems. Whatever is done by a system, is done scientifically; nature does nothing, except by the interposition of nature's God, without a system. A knowledge of these systems is science *generally*; a knowledge of any one system, *a* science. The numerous terms, the difficult rules, the complicated calculations, the mysterious analyses, are not *the science*; they are the handles, the guides, the agents which render the science comprehensible by human mind, invented by human beings for that purpose. They are the channels through which the Newtons, the Lockes, the Davys, the Liebigs, convey the researches of their expansive minds to unborn generations.—If science then, is a knowledge of the operations of nature, it must be from some unwholesome influence that so many individuals neglect to profit by it. The influence in the present instance, is *prejudice*—yes, prejudice—however disagreeable it may sound to those interested, it is too true; for what can it be but prejudice, that prompts men to say—"Our forefathers prospered without science, and why should'nt we?" What can it be but prejudice, which induces men to believe that the system they adopt, admits of no improvement?

In order to render the question more intelligible, it may be asked for what purpose do men apply manure to soils? Most assuredly to supply a something which is requisite to the growth of a plant, and which does not exist in the soil. Then, as we have the means of ascertaining what portiyn of the plant is supplied from the atmosphere, what from the rain which falls, and what from the soil, is it not evident that the slightest exercise of our reasoning faculties must enable us to judge with some degree of accuracy, what particular bodies or compounds should be added to the soil, in order that it may furnish the plant with due proportions of each of its component materials? If we once admit the possibility of the above statements—and who can deny that they are rational—we become advocates of science.

But in order to explain the subject more clearly, and that there may be no doubt as to the advantage of calling in the help of science in the application of manures—in making manuring a science, instead of an art, we will imagine an instance which has frequently occurred: two neighboring farmers enter upon the occupation of adjoining farms at the same time, and it so happens that they have adjoining fields of three-year-old turf; the soil in each field being composed, as far as ocular examination can detect, of the same materials. Being old friends, they make no secret to each other of the system of cultivation they intend to pursue; consequently, being convinced that some application is necessary to the turf, and having heard that nitrate of soda has had a beneficial effect upon such crops in many instances, they each decide upon applying this manure at the same rate per acre, and as nearly as possible at the same time. The result is, that a great increase in the crop is produced in one instance—in the other, no benefit whatever can be discovered. The consequence is, that the one individual denounces the use of nitrate of soda, the other applies it almost indiscriminately in almost all cases.—Meanwhile, this trifling circumstance probably engenders ill feeling between the old friends, and all because they cannot discover "a clue to the mystery." The foregoing is by no means an exaggerated picture of an every-day occurrence. This is the consequence of making manuring an *art*.

We will now suppose the same case treated scientifically—the parties being fully aware that a plant cannot abstract that from the soil which does not pre-exist in it. Their first impulse is either to submit a portion of the soil to the analytical examination of the operative chemist, or, being chemists themselves, to ascertain of what the soil is composed—the one individual finds it will be improved by the materials contained in the nitrate of soda—the other, not only that this manure will be useless, but what composition is required; now this is manuring *scientifically*; this is making manuring a *science*. The advantages of the latter system are obvious.

A little consideration, will, nevertheless, render it by no means remarkable that, notwithstanding the means of making the application of manure a *science*, have been long placed within the reach of agriculturists, yet that they have been utterly neglected; since it is generally known that the application of *artificial* fertilizers is comparatively of a recent date; prior to which period the evacuations of animals, combined with decayed vegetable matter, formed the staple manure of the country. Now *farm yard manure*, which was the chief application, contains every material that a plant requires; hence, if applied in sufficient quantities, it can never fail. But within a few years soils have been brought into cultivation, and those systems of farming have been adopted, which have compelled the agriculturist to introduce artificial manures, in order to supply the deficiency of nature. And from the circumstance that no artificial manures have been found, with one or two exceptions, to contain *every* material abstracted from the soil by plants generally, it is apparent that any one artificial manure is insufficient to maintain fertility in the soil. This renders it imperative upon the agriculturist to call in the assistance of chemistry, in order that he may be enabled to compete with other agriculturists; for if the soil requires phosphate of lime to produce a wheat crop, of what possible utility will it be to apply a manure which does not directly or indirectly afford that particular matter? And who can ascertain by mere ocular observation, whether the manure or the soil contains phosphate of lime?

If this problem cannot be solved by looking at the soil and the manure, what is the course to be pursued? We must endeavor to ascertain the composition of each, which cannot be done without the aid of science. It is very well to say, "Science was not necessary when my grandfather was a farmer." It is very well to say, "farmers have done well without science, and therefore it is unnecessary." But we must remember that our forefathers tilled the *richest* soil, at a time when farming produce realised almost double its present value, when receipts were larger and disbursements smaller, and

when they had abundance of farm-yard manure to preserve the fertility of soil, without resorting to the application of lime, nitrate of soda, and other mineral or artificial manures. Still it is by no means extraordinary that farmers of the present day, should be opposed to the application of scientific rules; or if not opposed to their application, at least careless in applying them; for, as they justly observe, farming has been conducted without science, and they cannot yet perceive the very different position in which they are placed, compared with farmers even of the last generation. The human mind is so subject to the unhealthy influence of prejudice, that it is no wonder farmers of the present day should be disposed to follow with almost invincible determination, the customs of past ages; yet, however natural it may be that they should thus act, it must be a source of sincere regret to the enlightened, unprejudiced mind, that they should thus be heaping up trouble for a future day.—*London Farmers' Mag.*

BOMMER'S MANURE.

Mr. Editor—The following communication I am sure will be read with interest by most of your subscribers, and as I have received recently so many intereogatories concerning "Bommer's Manure," I have concluded to send it for publication in the Planter, with such remarks as I may make upon it:

King William, July 6, 1843.

Mr. Woodfin—Dear Sir—I have seen the result of your experiment with Bommer's patent manure, in the last Planter, and while I believe every word you have said about, I am not entirely satisfied that it will be to the interest of every one to purchase the right to make and use it. Virginians have been so often humbugged with patent inventions, that I am very slow to receive any notion that comes secreted under a patent right, I will, therefore, be obliged to you to answer the following questions:

1st. Can the materials of which the manure is composed, and also those required to produce such speedy decomposition, be procured in sufficient quantities on a *poor forest farm* to make it an object on such a farm; or is it only adapted to the neighborhood of towns, where mincral, animal and other substances can be readily procured at little cost?

2· From the experiment you have made, do you think that labor may be profitably employed in making this manure on large farms, or is it merely intended for experimenters on truck patches, gardens, &c.?

3d. As the decomposition is so rapidly produced, does not the ammonia (or whatever you chemists call it, I mean the strength of the manure,) as speedily pass off, and the manure become comparatively worthless, as you have seen farm-yard manure become by being kept too long?

4th. You say it is not costly, but troublesome; how much and what kind of trouble is it? Is it that kind of trouble with which every successful farmer is acquainted, and for which he gets rewarded, more or less, or is it like the Indian's gun, costs more than it comes to?

5th. Taking every thing connected with it into consideration, would you advise a farmer owning some five or six hundred acres of poor land, situated twelve miles from navigation, and 30 miles from any town, employing the labor of twelve hands, and with a large and growing family, and not a cent to spend in humbugs or costly experiments, to purchase the right to make and use this mauure?

You will please pardon the liberty I have taken in addressing this communication to you; my only apology is my great desire to use all the means in my power, for the improvement of our mother earth, and I should like to become acquainted with this process of Mr. Bommer's, but do not like the idea of buying a pig in a bag.

Should you think it worth while to reply to this, you can do it through the Planter, if you prefer it, (as I suppose it probable you will receive other communications on this subject,) or by letter privately, by mail, as you may choose.

Yours, most respectfully,

Wm. S. Ryland.

In answering the foregoing queries, I shall take them up in the order they are propounded, without any farther preliminary remark.

1st. "Can the materials of which the manure is composed, and also those required to produce such speedy decomposition, be procured in sufficient quantities on a *poor forest farm?*" &c. &c. I answer yes—they can be procured in abundance, both for making the manure, and also for their speedy decomposition, with the exception of some articles necessary to make the lees.* The method is not adapted to the neighborhood of towns, except where large quantities of vegetable substances can be had.

2d. "From the experiment you have made, do you think that labor may be profitably employed in making this manure on large farms?" &c. Answer, I do. It is equally well adapted "to truck patches, gardens, &c." if they have an abundance of vegetable substances, not otherwise.

3. "As the decomposition is so speedily produced, does not the ammonia (or whatever you chemists call it, I mean the strength of the manure,) as speedily pass off?" &c. To this question I answer, in consequence of the great heat produced in the process of fermentation, it is quite probable that a portion of the ammonia may escape. Ammonia, however, has great affinity for water, and as a quantity of water is necessary in making the manure, I should think the escape of ammonia would not be very great. Mr. Bommer says "the salts produced in the process of fermentation, 'are a quantity of nitrate of lime and caustic potash, ammonia and saltpetre'—four substances which modern chemistry has found to contain the most fecundating properties possible."

4th. "You say it is not costly, but troublesome; how much and what kind of trouble is it?" &c. I alluded to the trouble of collecting the materials, making the compost heaps, making the "lees," and the several applications and waterings with the same, necessary to complete the decomposition of the materials. The labor thus expended I am sure would result in a rich reward to a skilful and persevering farmer. I must most respectfully ask to be excused from answering the 5th question. I will not advise any one to buy the right, lest for want of proper energy and skill on the part of the purchaser, it might fail to answer his purpose, and I should have the blame; I will, however, say this much, that from what I have heard of Mr. Ryland's zeal and energy in doing what he can to improve our "mother earth," that Bommer's patent could hardly fail of success in such hands. With him it would neither be like the "Indian's gun," nor the "pig in the bag."

In conclusion, let me remark, that I am no way interested in the sale of these patents—I own only an individual right, and should there not be another sold in the State it would be a matter of perfect indifference to me.

Very truly, yours,

Geo. Woodfin.

Southern Planter.

*The articles alluded to in the exception, which Mr. Woodfin did not consider himself at liberty to specify, are *lime* and *salt;* about fifty pounds of the former and a couple of pounds of the latter being required to an ordinary heap of the manure.—Ed. S. P.

Let every one cultivate flowers. They require little space, they furnish a tasteful and healthful employment, and contribute much to the happiness which forms the grand object of pursuit with all.—*Albany Cult.*

A princely mind will ruin a private fortune—keep the rank in which Providence hath placed you; and do not make yourself unhappy, because you cannot afford whatever a wild fancy might suggest.

Millwood, August 3, 1843.

Mr. Editor—You desire information as to the comparative merits of the Durham, Devon and Ayrshire cattle. Having tried all, I will give you the result of my experience, together with a brief history of the origin and the improvements of these celebrated cattle.

Until lately, there existed in England a great difference of opinion as to the superior breed, each having strenuous advocates. Since the very great and decided improvement of the short horns, effected by the skill, judgment and perseverance of Mr. Charles Collins, public opinion has awarded to this improved breed, the first rank, as possessing "a combination of perfections," hitherto attained by no other breed of cattle. The counties of Durham and York have long been celebrated for their short horns, of undoubted foreign origin, distinguished principally as extraordinary milkers. These cattle were large, coarse and deficient in the fore-quarter.

On the banks of the river Tees, they assumed a different character. "In color, they resembled the improved short horns, being occasionally red, red and white, and roan, though the last named colour was not then so frequent as now. They possessed a fine mellow skin and flesh, good hair, and light offal, particularly wide carcasses, and fore-quarters of extraordinary depth and capacity."

These latter Mr. Collins selected for his experiments, and by two or three judicious crosses upon them, and by proper selections, after these crosses were obtained, he established a breed which, for general excellence, has never been equalled.

It is much to be regretted that these experiments were conducted with as much secrecy as practicable, and that Mr. Collins should have declined, even after realizing a forture by the sale of his stock, to make known to the public the principles that guided him in producing such magnificent results. It is, however, known that his first step towards this improvement, was the breeding them down from a larger to a smaller animal, well aware that overgrown cattle are, almost necessarily, coarse. A single cross on the Polled Galloway, is supposed to have contributed most essentially to his success, as from it, in the fourth generation, Lady was produced, a cow occupying in the Herd Book as high a place as old Prunella in the Stud Book. The great object of Mr. Collins was, the production of a breed as nearly perfect in formation as possible, of early maturity, with a capacity to continue growing, and of great aptitude to fatten, without sacrificing their properties for the dairy. That he attained these objects is manifest, from the extraordinary prices he obtained for his stock, (having sold Comet, at 6 years old, for $5000,) and the avidity with which they were purchased, not only at home but abroad, and their rapid introduction into almost every portion of the civilized globe. Possessing the rare combination of qualities, hitherto considered incompatible, a great disposition to fatten, with high qualifications for the dairy, together with a carcass almost faultless, and of beautiful colors, these cattle could hardly fail attracting the attention of breeders. The Americans perhaps, of all foreign purchasers, have been the most liberal. Extensive importations have been made into the Northern, Middle and Western States, and a few of these cattle have been introduced into South Carolina. On the luxuriant pastures of Kentucky, they are in a state of progressive improvement. In the Northern and Middle States, they continue to maintain all their characteristic excellence. And in our State, with proper care of them, they exhibit, as yet, no degeneracy. They are large consumers of food, compared with our native stock, and require rich pasturage to keep them in high condition, but no breed of cattle will make greater returns, for extra care bestowed on them. Our dry and arid Sand Hills are unsuited to them, but any good cotton estate will support a few, enough for all the ordinary purposes of the plantation. Like all other cattle, they rapidly decline if turned

into the woods, half starved and utterly neglected. Such treatment is adapted to no breed, and least of all to an improved one. Mine have been kept during the spring and summer, in good pastures, on river low-grounds, having the run, in autumn, of corn fields, and in very bad weather they are fed on straw, shucks or hay. Under this treatment, I find they thrive very well, always looking in far better condition than the native cattle of the country. Such as are in use are, of course, highly fed, on boiled peas or meal, mixed with cut oats, fodder or hay.—Many of my cows have yielded thirty quarts a day; twenty is by no means uncommon.

On a future occasion I will notice the Devon and Ayrshires; to do so now, would exhaust your own, as well as the patience of your readers.

W. H.

Columbia (S. C.) Planter.

INDIAN CORN.

The great crop of the United States, whether we look at quantity or value, is unquestionably our corn crop. Four hundred and fifty millions of bushels in 1840, and probably five hundred millions in 1842, show the importance of this grain to us. And yet the quantity now grown is nothing, a mere drop in the bucket, compared with what we might do, should circumstances render it advisable to increase the production to an extent that might easily be reached on the present cultivated lands of the Union. In order to show at a glance what might be done, we have taken the pains to collect a few instances of good crops that have been grown among us, and would remark that on a very large portion of our soils, in favorable seasons, and with the cultivation corn should receive, crops like the ones named may be as well grown as inferior ones. It is true, we now and then meet with a farmer or writer, who asserts that no man ever saw 75 bushels of corn grown on an acre, and that the farmer should be contented with 25; but the only emotions excited by such, are contempt for the ignorant confidence shown, and pity that in this country men should be found so far behind the times.

Name and place of cultivator.	Bush. per acre.
R. H. Rose, Silver Lake, Pa.	136
John Stevens, Hoboken, N. J.	118
J. & M. Pratt, Madison, N. Y.	172½
" " "	170
Samuel Chidsey, Cayuga, N. Y.	132
Earl Stimson, Saratoga, N. Y.	112
Wm. M'Clure, Alleghany co., Pa.	129
Joseph Evans, Washington co., Pa.	136
B. Bartlett, Eaton, N. Y.	174
T. & H. Little, Newburyport, Mass.	116
" " "	115
Mr. Wilmath, Taunton, Mass.	142
Chas. Bugbee, Palmer, Mass.	108
Benj. Butler, Chenango, N. Y.	140
"Old Farmer," Rhode Island	103
Asahel Renick, Pickaway co., Ohio	140
S. Lathrop, W. Springfield, Mass.	100
P. Reybold, Newcastle, Del., (average of 22 acres)	100 5-7
R. H. Shelton, Cayuga co., N. Y.	108
E. Humphreys, Caledonia, N. Y.	110
R. Lamprey, Moultonborough, N. H.	131
Mr. Brown, Strafford, N. H.	116
P. P. Pilsbury, Tuftonborough, N. H.	130
J. F. Osborn, Cayuga co., N. Y.	144
J. Sherman, " "	121
" " "	112
Mr. Ellsworth, Conn.	120
G. W. Williams, Bourbon co., Ky.	158
W. Ingalls, Oswego co., N. Y.	120
" "	154
J. Myers, Canton, Ohio	193
B. Bradly, Bloomfield, N. Y.	116
Samuel Phelps, Cayuga, N. Y.	122
Wm. Ingell, Oswego, N. Y.	113
W. Wilcox, Saratoga, N. Y.	132

The number of such crops where the product exceeded 100 bushels per acre, might be extended to a great length from the list in our possession, but the above is sufficient. Still we imagine some farmers will say, (some have said so,) that the man who puts manure and labor enough on an acre to get 100 bushels of corn is a loser. We would ask *how?* A man may cultivate an acre of corn and get thirty bushels an acre, and he will be a looser. But it is scarcely possible when the production is 100. In such a case, all over 50 bushels may be considered profit. In addition to this, his acre of land is placed in a condition to produce more good crops, and the additional amount of these is to be added to the list of profits. The man who has brought 30 acres of land to such a state that it will produce 100 bushels of corn per acre, is far better off than the one who has 100 acres, yielding only 25 bushels per acre; and of this fact we are happy to find many of our farmers are beginning to be well convinced. It is unnecessary to say the remarks we have made respecting corn, are equally applicable to any other grain or grass, and that the grand secret of success is to cultivate no more land than you can make rich.—*Albany Cultivator.*

SCRAPS FROM DE KALB COUNTY.

To the Editors of the Tenn. State Agriculturist:

GENTLEMEN—Tell the good housewives in Gath, to cook their sweet potatoes over a brisk fire; they are much more palatable and delicious when thus managed; whereas much of their flavor is lost by their being steamed over a lingering fire for a half day at a time before used.

THE DAIRY.

Every man that places any kind of an estimate on the comforts and luxuries of life, should furnish himself with a dairy; it should be well constructed and neatly managed.—Place boxes around it; fill them with rich earth and plant out hop vines in them; the vines will gracefully cover the dairy with their foilage, and completely shut out the beams of the summer's sun. How cool and refreshing are the contents of such a dairy! Then make yours like it.

PICKLE.

Take one gallon of whiskey and two of spring water and put them in a stone jar; put in your cucumbers and they will be ready for use in a few weeks, without any further preparation.—Try it. The writer, though, would be willing never more to taste a pickle, if whiskey could be banished from our beloved America.

BISCUIT.

The most wholesome biscuit I ever have eaten, were made of equal parts of wheat flour and that from flour corn. They are delicious and palatable. Try them.

GOURDS.

It is better to drink water from a gourd grown in Tennessee, than from a silver cup brought from London. Then cultivate gourds.

PRESERVATION OF HAMS.

The people in this mountain country, pack away bacon hams in ashes. The time of packing is early in March before the oil begins running from the effects of hot weather. A hogshead or barrel will answer as a place of packing, and the only precaution necessary, is to have the hams put up early and have the ashes dry, placing a layer of hams, then ashes, alternately. The hogshead should then be set in a dry place.

WHOOPING-COUGH.

Opossum's oil is said to be a sovereign cure for this painful disease. The patient takes it inwardly by doses after the manner of sweet or castor oil. Try it.

FOUNDER.

Bleed the horse freely, give him a half pound of salts, rub a small portion of spirits turpentine on at the top of his hoofs, force him to exercise, and he will be well soon. Founder is in the system at large, and not in the legs particularly; hence the efficacy of a purgative and bleeding.

FOOT-EVIL.

A. G. Alsworth, in a former volume of the Agriculturist, recommended boiling tar and tallow to be applied to the foot. I followed this direction, and found it a certain cure. Having tried it, I recommend it to others.

THE AXE.

The axe should weigh six pounds. This weight will, in general, suite all men that weigh from 130 to 160. It should be made with a heavy poll, a long blade, gradually tapering, with the lower corner a little the longer; the sides of the blade should be smoth and nearly straight, and the edge from corner to corner should be nearly straight. In grinding the axe, it should be laid flat on the grindstone, grinding from the eye downward; an axe is soon spoiled by holding it up in grinding, so as only to let a small space near the edge touch the grindstone. Collin's axes are styled by many, the best in use, but the writer it is hoped, will not be thought visionary for entertaining a different opinion. I have used several of them, and I never have found an easy chopping axe from the number. They are too light—have too small polls, and are too convex both on the sides of the blade and on the edge from corner to corner. An examination of the laws of motion, and the construction of the wedge will prove these assertions true. There is, however, one advantage in Collin's axes, and that consists in what the man said of his wife—"her is all temper." I don't see why we might not have all our axes made in our own State; for we have every necessary material at hand for their manufactory; and yet we must have them brought from New England. This reminds me of friend Kelp walking three miles to borrow meal for breakfast, when he might have gone to mill in half the time.

May the good people of this State not go in debt from this time henceforth; and when starving necessity compels them to buy, may they buy such articles as are manufactured in their own State. In view of this, it is better to use a tin cup of Tennessee manufactory, than a Liverpool glass—it is better to wear a tow shirt of our mother's make, than trans-Atlantic linen.—If the people would firmly conclude to live within themselves, to live at home, it would do more to prevent the influx of useless foreign merchandze, than all the tariff laws that stare through the ports from St. Johns to Sabine—manufactures would spring up, our streams would resound with the joyful voice of machinery, the farmer could get a demand for his produce, by furnishing the mechanic the raw material, and the mechanic in return could supply the farmer with manufactured articles. In conclusion, can there be any hope of prosperous times of long continuance until this is the case?

Can there be any hope of "easy times" until farmers can find a vent for their produce? and have they any unwavering assurance that they will find this vent until manufactories are established in our country?

Very respectfully,

DICK FORESTER.

Near Liberty, Tenn., July, 1843.

TO DESTROY WORMS ON CABBAGE.

GENTLEMEN—I am not aware that the following easy and simple method of destroying worms on cabbage, has ever appeared in print. I believe it was discovered by an unlearned person, and I hope will not be less efficacious on that account. As the worms are already commencing their depredations, it will be well to publish it soon.

At night (about sun down) strip off one of the lower leaves and lay it on the top of the cabbage, back side down. In the morning very early take it off, and the whole, or a large proportion of the worms of that cabbage will be on it, and can be disposed of as any one sees fit.—Two or three trials will effectually free the cabbage from all worms. I believe it never fails except when the nights are quite cool.

Respectfully, W. CHANDLER.

Tennessee Agriculturist.

ON DEEP PLOWING.

Deep plowing differs from ordinary and subsoil plowing in this—that its special object is to bring to the surface and to mix with the upper soil a portion of that which has lain long at a considerable depth, and has been more or less undisturbed.

The benefit of such an admixture of fresh soil is in many localities undoubted, while in others the practical farmer is decidedly opposed to it. On what principle does its beneficial action depend, and in what circumstances is it likely to be attended with disadvantage?

1. It is known that when a heavy shower of rain falls, it sinks into the soil, and carries down with it such readily soluble substances as it meets with on the surface. But other substances, also, which are more sparingly solnble, slowly and gradually find their way into the subsoil, and there more or less permanently remain. Among these may be reckoned gypsum, and especially those silicates of potash and soda, so useful to grain-bearing plants. Such substances as these naturally accumulate beyond the reach of the ordinary plow. Insoluble substances likewise slowly sink. This is well known to be the case with lime, when laid upon or plowed into land. So it is with clay, when mixed with a surface soil of sand or peat. They all descend 'ill they get beyond the reach of the common plow. Thus it happens that after the surface soil becomes exhausted of one or other of those inorganic compounds which the crops require, an ample supply of it may still be present in the subsoil, though, until turned up, unavailable for the promotion of vegetable growth.

There can be little question, I think, that the greater success which attends the introduction of new implements in the hands of better instructed men, upon farms long held in arable culture, is to be ascribed in part to this cause. One tenant, duriug a long lease, has been in the habit of plowing to a depth of three, or at most, perhaps, four inches—and from this surface the crops he has planted have derived their chief supplies of inorganic food. He has limed his land in the customary manner, and has laid upon it all the manure he could raise, but his crops have been usually indifferent, and he considers the land of comparatively little value. But another tenant comes, and with better implements turns up the land to a depth of 7 or 8 inches.—He thus brings to the surface the lime and the accumulated manures which have *naturally* sunk, and which his predecessor had permitted year after year to bury themselves in his subsoil. He thus has a new, otten a rich, and almost always a virgin soil to work upon—one which from being long buried, may require a winter's exposure and mellowing in the air, but which in most cases is sure to repay him for any extra cost.

Again, it is known that some districts, for reasons perhaps not well understood, are more infested than others with insects that attack the corn or other crops. These insects, their eggs, or their larvæ, generally bury themselves in the undisturbed soil, immediately beyond the ordinary reach of the plow. If they remain wholly undisturbed during the preparation of the soil, some species remain in a dormant state, and the subsequent crop may in a great measure escape. Plow the land deeper than usual, and you bring them all to the surface. Do this in the autumn and leave your land unsown, and the frost of winter way kill the greater part, so that the crops may thereafter grow in safety. But let this deep plowing be done in the spring, and you bring all these insects within the reach of the early sun, and thus call them to life in such numbers as almost to ensure the destruction of your coming crop.

IMPROVEMENT OF THE SOIL BY MIXING.

There are some soils so obviously defective in constitution, that the most common observer can at once pronounce them likely to be improved by mechanical admixtures of various kinds. Thus peaty soils abound too much in vegetable matter; a mixture of earthy substances, therefore, of almost any common kind, is readily indicated as a means of improvement. In like manner we naturally impart consistency to a sandy soil by an admixture of clay, and openness and porosity to stiff clays by the addition of sand.

The first and obvious effect of such additions is to alter the physical qualities of the soil—to consolidate the peats and sands, and to loosen the clays. But the fertility of a soil, or its power of producing a profitable return of this or that crop, depends in the first place on its chemical constitution. It must contain in sufficient abundance all the inorganic substances which that crop requires for its daily food. Where this is already the case, as in a rich stiff clay, a decided improvement may be produced by an admixture with silicious sand, which merely separates the particles mechanically, and renders the whole more porous. But let the clay be deficient in some necessary constituent of a fertile soil, and such an addition of siliceous would not produce by any means an equal benefit. It may be proper to add this sand with the view of producing the mere physical alteration, but we must add some other substance also, for the purpose of producing the necessary chemical change.

The good effects which almost invariably follow from the addition of clay to peaty or sandy soils, are due to the production at one and the same time, of a physical and a chemical change. They are not only rendered firmer or more solid by the admixture of clay, but they derive from this clay at the same time, some of those mineral substances which they previously contained in less abundance.

The addition of marl to the land acts often in a similar two-fold capacity. It renders clay lands more open and friable, and to all soils brings an addition of carbonate, and generally of phosphate of lime, both of which are proved by experience to be not only very influential, but to be absolutely necessary to healthy vegetation.

That much benefit to the land would in many instances accrue from such simple admixtures as those above adverted to, where the means are available, will be readily granted. The only question on the subject that ought to arise in the mind of a prudent man, is that which is connected with the economy of the case. Is this the most profitable way in which I can spend my money? Can I employ the spare labor of my men and horses in any other way which will yield me a larger return? It is obvious that the answer to these questions will be modified by the circumstances of the district in which he lives. It may be more profitable to drain—or labor may be in great request and at a high premium—or a larger return may be obtained by the investment of money in purchasing new than in improving old lands.

SALT AS A MANURE.

We know that plants require for their sustenance and growth, a certain supply of each of the constituents of common salt, which supply, in general, they must obtain from the soil. If the soil in any field contain naturally a sufficient quantity of common salt, or of chlorine and soda in any other state of combination, it will be unnecessary to add this substance; or if added, it will produce no beneficial effect. If, on the other hand, the soil contain little, and has no natural source of supply the addition of salt may cause a considerable increase in the crop.

Now there are certain localities in which we can say beforehand that common salt is likely to be abundant in the soil. Such are the lands that lie along the sea-coast, or which are exposed to the action of prevailing sea winds. Over such districts the spray of the sea is constantly borne by the winds and strewed upon the land, or is lifted high in the air, from which it descends afterwards in the rains. This consideration, therefore, affords us the important practical rule in regard to the application of common salt—that it is most likely to be beneficial in spots which are remote from the sea, or are sheltered from the prevailing sea winds.

This consideration, it may be hoped, will induce many practical men to proceed with more confidence in making trial of its effects on inland situations.

But some plants are more likely to be benefited by the application of common salt than others. Observations are still wanting to show which of our cultivated crops is most favored by common salt. Some crops may delight more in salt than others; and if we consider how much alkaline matter is contained in the tops and bulbs of the potato and turnep, we are almost justified in concluding that generally common salt will benefit green crops more than crops of grain, and that it will promote more the developement of the leaf and stem than the filling of the ear. If this be so, we can readily understand how a soil may already contain abundance of salt to supply with ease the wants of one crop, and yet too little to meet the demands of another crop.—*Johnston's Lectures.*

AGRICULTURE.

We are highly gratified at the increased interest now manifested at the South generally, on the subject of agriculture, and we trust the day is not distant, when it shall be seen in the Carolinas and Georgia, that we are able to make our own corn, raise our own mules, horses, cattle and hogs, as well as our numerous cotton bags. But if we would do this, we must abandon the ruinous practice, so long pursued among us, of wearing out our lands, throwing them away, and clearing more until all is wasted, and then decamping and seeking a new home among the fertile regions of the far West. We must improve our lands; we must, by improving our system of cultivation, learn to plant *less* and make *more;* we must, without extending our borders, increase our resources, and thus virtually enlarge our territory.

"He is a public benefactor, who, by the prudent and skilful outlay of his time and money, shall make a single field yield permanently a double crop; and he who does this over a square mile, virtually adds a square mile to the national territory—nay, he does more: he doubles to this extent the territorial resources of the country, without giving the State any larger territory to defend. All hail, then, to the improvers of the soil! Health and long life be their fortune—may their dreams be few and pleasant, and their sleep the sweet repose of the weary—may they see the fruits of their own labor, and may their sons reap still heavier harvests."

But if we would thus improve the soil, and so become public benefactors, we must become acquainted with the nature and character of our soil, and what sort of culture, &c., is adapted to its nature, condition, &c., and to do this we must read, yes, read as well as work; for whatever may be thought and said of "Book Farming" and "Theoretical Planting," we will find the following sentences to hold good in the main:

"Show me a thrifty, practical and experimental farmer, and I will show you a man who reads works on agriculture, or who borrows his hints from a neighbor who takes agricultural papers.

"Show me a farmer whose fences are going to decay; whose half-starved cattle are strolling over a brush field; and I will show you a man who, if he is not on the retrograde track, takes too little interest in agriculture, to patronize an agricultural paper."

But if we would read, we must take a newspaper: aye, that's the very thing we would recommend, for the borrowing system we never did like: take a paper yourself. "But this will increase my expenses!" Aye, true enough, it will from one to two and a half, or three dollars a year; but then of it increases the yield of your fields two fold, and makes you a richer, happier and wiser man, surely you will not be much the loser in the end.—*S. C. Temp. Advocate.*

Encourage youth to contend with and overcome difficulties.

Dr. Braxton, in an address before the Agricultural Society of King William county, Virginia, says:

That in all judicious systems of husbandry, the first step should be to establish a good rotation of crops. Different soils and different situations, of course, require very different rotations. He would, however, lay it down as "a safe rule, that no land ought to be put in grain cultivation more than half its time, that is, more than one grain crop should not be taken from land in two years, or two in four, or three in six years; and wheat should never follow corn; corn follows wheat very well, and oats succeed corn pretty well. But I would say, let clover follow corn without any grain crop whatever, as I believe the notion that it was necessary to have small grain to shade the young clover, is now pretty well exploded; as every observant farmer must have noticed, that wherever the fly had destroyed his wheat, the clover was much better than where it had been shaded and protected, as they call it, by a luxuriant growth of wheat; and that when the wheat was very luxuriant, the clover was generally killed." He speaks highly of the increased attention paid to the cultivation of artificial grasses, and particularly to that king of the tribe, red clover; of which he thinks there is now sown in King William county, a bushel of seed for every ounce that was sown but ten years ago! But still he notes it as among their faults, to have too great a surface in grain, and too little in grass. "All agricultural histories," says the Doctor, "both ancient and modern, prove that in proportion as that branch of husbandry has been attended to, that district of country has improved, and the proprietors have become independent, prosperous and happy." On the subject of manures too, he believes they are greatly deficient; they do not make as much as they ought, and might; and what they do make, they do not use to the best advantage. His "own experience goes directly in favor of top-dressing the year previous to the field coming in cultivation. But as a most judicious farmer says, put it on in any and every way you can, it will all do good."

The Doctor sets red clover down as the most valuable of all grasses. One good coat of that "I think is fully equal, if not superior, to any dressing of putrescent manure we can give our lands." He exhorts his brother farmers to meet every returning season with an increased energy and zeal in the good cause; and reminds them of the good old proverb, that "he who withholdeth not his hand from the plough, shall not want bread." He holds up the cheering hope, that by patient and persevering industry, and labor judiciously directed, we shall experience the best results—"certainly the doubling and tripling of the productiveness of our farms."

Orchards.—All orchards not in culture should have the hogs turned into them to eat the falling fruit. In doing so thousands and tens of thousands of the insectiferous enemies of the apple will be destroyed in their embrio state.—The trunks of the trees should also be rubbed thoroughly with a hard brush and then painted with a mixture of soft soap and flour of sulphur, in the proportion of five gallons of the former to one of the latter, and to make assurance doubly sure, lime (unslacked best) should be strewn pretty freely under the trees, not forgetting to sow with a heavy hand immediately around the trunks.

We often hear complaints made by farmers of the decay and death of their fruit trees, and to our mind the reason is obvious enough. It is *neglect*. Fruit trees, like animal and human bodies, have their enemies and diseases to contend against, and as they cannot doctor themselves, require that their wants should be supplied by their owners. If the treatment we recommend were resorted to twice or thrice a year, and orchards were not burthened with grasses or small grain, but subjected to row culture of some kind, we entertain not the slightest doubt but that even trees which are now enjoying a mere breathing existence, might be resuscitated into vigorous health, provided care were taken in judiciously pruning the decayed limbs and applying a proper composition to the wounds thus made.—*American Farmer.*

How to make an Unproductive Fruit Tree Bear.—A lady of our acquaintance took us into her garden a few days ago, where we were shown an apple tree which, she informed us, had been planted for ten or more years, but had never before borne any fruit. In looking over an old volume, she accidentally met with what purported to be a remedy for this unproductiveness, which was simply to cut from each limb, close to where it diverges from the trunk, a piece of bark about four inches round the limb, and one inch in width, and immediately replace it by tying it on with a rag until it adhered again. Early in the spring she tried the experiment upon the tree we speak of, leaving however two or three of the limbs untouched. The result is, that it is now filled with apples, which bid fair to ripen finely; but it is worthy of remark, that only on those limbs which had been cut is the fruit to be seen. The operation is very simple; and, as it has proved successful in this instance, we have no hesitation in recommending its trial in similar cases.—*Reading Gazette.*

Tomato Figs.—We copy the following from the American Farmer. It will soon be a seasonable article. The experiment has been tried in this quarter with the most satisfactory results. Rich specimens of the fruit thus prepared, were exhibited at the shows of the Cincinnati Horticultural Society this spring.—*Cin. Ga.*

Patent Office, July 10, 1841.

Dear Sir—The medicinal qualities of Tomatoes have greatly increased their cultivation, and every new preparation of the article is deserving consideration. A sample of "Tomato Figs" has just been deposited at the Patent Office, of a very superior quality. From the taste, I should suppose all the good qualities of the fruit are retained. In appearance, the drum of tomatoes resembles one of figs so nearly, that they might easily be mistaken for the same.

The sample is deposited by Mrs. Steiger of this city, and the recipe transmitted with it is enclosed for publication. It is deeply to be regretted, that since the periodicals of the day are open to communications, that so many valuable improvements are lost to the world barely for the want of publicity. Others may have dried the Tomatoes with a recipe, however, less successful. Very respectfully,

H. L. Ellsworth.

Hon. J. S. Skinner.

Take 6 lbs. of sugar to 1 peck [or 16 lbs.] of the fruit. Scald and remove the skin of the fruit in the usual way. Cook them over a fire, their own juice being sufficient without the addition of water, until the sugar penetrates and they are clarified. They are then taken out, spread on dishes, flattened and dried in the sun. A small quantity of the syrup should be occasionally sprinkled over them, whilst drying; after which, pack them down in boxes, treating each layer with powdered sugar. The syrup is afterwards concentrated and bottled for use.—They will keep well from year to year and retain surprisingly their flavor, which is nearly that of the best quality of fresh figs! The pear shaped or single tomatoes answer the purpose best. Ordinary brown sugar may be used, a large portion of which is retained in the syrup.

Lime Water for Worms.—Take six quarts of water, add half a pound of caustic lime, and after letting it stand a few minutes, commence watering the ground infested with worms, and they will soon be destroyed.—*Tenn. Agr.*

The whiteness of ivory handled knives may be restored by rubbing them with fine sand paper, or emery.

MONROE AGRICULTURAL SOCIETY.

The Annual Fair of the Monroe Agricultural Society will be held at Forsyth, on the second Wednesday in November next, when an Address will be delivered before the Society, after which the following premiums will be awarded by committees appointed for that purpose.

Competitors for premiums on crops will be required to produce certificates from one or more disinterested persons, of the amount of produce grown per acre, and it will also be desirable that they present a detailed statement of their mode of culture.

For the best acre of Corn on bottom land	$5 00
do do upland	5 00
Cotton on bottom land	5 00
do upland	5 00
Wheat, one acre	2 50
Sweet Potatoes, do	1 00
Turneps, do	1 00
The greatest quantity of cocoons, do	2 00
Best 10 yards of silk for lady's dress, a pair of Glass Pitchers.	
Pair of Silk Hose	1 00
Gloves do	1 00
For pound Sewing Silk	2 00
For 10 yards of Homespun for lady's dress, a Glass Pitcher.	
For 10 yards do. for gentleman's dress, a pair of Glass Preserve Dishes.	
For 20 yards of Negro Cloth	1 00
For 10 yards of Negro Blankets	1 00
For 10 yards of Carpeting	1 00
For 10 yards of Cotton Bagging	1 00
For Lady's Bonnet	1 00
For Hat	1 00
For Wool Hat	50
For best Stallion, 4 years old and upwards	10 00
For 3 do one year's subscription to the Turf Register.	
For Horse Colt 2 years old	2 00
For Brood Mare 4 years old and upwards	5 00
For Filly 3	4 00
For Filly 2	2 50
For Spring Colt	3 00
For Gelding	5 00
For pair Carriage Horses	5 00
For pair Mules	5 00
For Jack	5 00
For Jenny	5 00
For Bull	3 00
For Cow	3 00
For yoke of Oxen	5 00
For Ram	2 50
For Ewe	2 50
For Boar	5 00
For Sow	5 00
For Pork Hog, according to age	2 50
For litter Pigs between 6 and 12 months	4 00
For 6 months and under	2 50

Bradford T. Chapman offers a premium of a pair of Berkshire pigs for the best colt by Penndyer.

E. G. Cabaniss, Sec'y.

Cockroaches.—The following method of destroying these detestable intruders is simple and effective: Procure from the apothecary a small quantity of that odoriferous vegetable called poke root. Boil it in water until the juices are extracted, and mingle the liquor with good molasses; spread the mixture in large platters or soup plates; place these wherever the cockroaches visit, and the enemy will be found slain by fifties and hundreds on the following morning. A gentleman to whom we are indebted for this information, states that he slaughtered 575 cockroaches in one night, by the above process, and that the root which had been boiled being thrown into a closet thickly infested by the enemy, the place was quitted entirely in a few days, great numbers being left dead upon the field.

Boston Gazette.

To Destroy Bed Bugs.—Make a strong decoction of red pepper, when ripe, and apply it with a common paint brush to the joints of the bedsteads, wainscoting, &c., where these odious insects usually resort, and it is said it will soon destroy them.—*Tenn. Agr.*

WEDNESDAY, AUGUST 30, 1843.

BOMMER'S MANURE.

In our last we stated our impression that there was not an agent in Georgia for vending the rights to use this method of preparing manure. This notice has brought out Mr. Hardwick, of Sparta, to whose advertisement, in another part of this paper, we refer the reader. While on this subject, we commend to the reader's attention the communication of Mr. George Woodfin of Va., in which he gives his views of the method, and expresses his confidence in its success. We trust, however, we shall, ere long, be able to give the views of some of our own planters, who are now testing the system, and who have promised us the result of their experiments.

New Cotton.—The first bale of new cotton brought to our market this season, was received on Thursday last, from the plantation of Augustus Lamkin, of Columbia county.

A GOOD CROP.

From the Maryland *Telescope* we clip the following account of a crop of wheat raised by a citizen of Queen Anne's county in that State, to which we desire to invite the attention of our planters, as an evidence of the result that may be attained by an enlightened system of farming. The county of Queen Anne's is among the earliest settled in the State, and under the same system of agriculture pursued in Georgia, its lands would have been long since rendered unproductive and valueless. But instead of that we find her planters growing on land which has been cultivated longer than any lands in Georgia, larger crops than are produced on our best fresh lands. To what shall we attribute this? Certainly not entirely to the influence of climate, for there are many portions of Georgia and the Southern States admirably well adapted to the growth of wheat. Is it not more proper, then, and we put this question in all sincerity to every planter, that we should ascribe it to the miserably defective system of agriculture generally pursued at the South? We think so, and we feel fully persuaded that our readers will sustain this opinion—indeed, we are very confident no one will controvert its justice. Why then, we ask, is it so? Why are not our planters making the same progress in agricultural improvement with their brethren throughout the Middle, Eastern and Northwestern States?—These are imposing questions, and they may be easily answered. The great, perhaps the greatest, barrier to their progressive improvement is, they are generally too wise in their own conceit—they scout the idea that any man can learn them any thing about farming, because, say they, "*we have been farming all our lives, and we know that no man can teach us*—to suppose such a thing would be setting us down as stupid dolts, who cannot and will not profit by the light of experience." They have, therefore, an utter horror, a most perfect contempt, of what they are pleased to term "*book farming*," and cannot be persuaded to read an agricultural work.—One of the consequences, and the greatest evil of this ignorance on a subject which concerns them most, is that they are all struggling from the beginning to the close of the year to cultivate too much land—they are, therefore, in a continued strain—they have no time to devote to the improvement of land, but as rapidly as its fertility is destroyed by their exhausting systems of culture, instead of improving by manuring, their only remedy for the evil is to clear more—never having learned that the experience of all practical, enlightened farmers is, that it is cheaper to improve land than to clear it.—This is the great secret, and these are the great barriers to the improvement of Southern agriculture, and they are barriers of no ordinary magnitude—to correct which should be the object, the paramount object, of every patriot and friend of agricultural improvement.

Let then the Agricultural Societies throughout the country, as rapidly as they are formed, expose the fallacy of the system, and enforce with all their influence a corrective for the evil, and we will, ere long, record the growth of such crops in Georgia as the following, to which we alluded in the outset.

"Our respected fellow citizen, William Carmichael, Esq., raised this year upon twenty acres of land, *one thousand and twenty six* bushels of Mediterranean wheat, being a fraction below *fifty one and a half bushels to the acre*, averaging sixty pounds to the bushel. This is a very great yield, larger we believe, than was ever made before on this shore, and we question whether the State can beat it. This shows what *good farming* will accomplish.

"The land on which this wheat was raised, is not better wheat land than two thirds of this county, but has been greatly improved by the use of marl and marsh mud."

The Farmers' Cabinet says—One of our Maryland friends makes some inquiry in relation to the curing, &c. of corn that has been sown purposely for fodder. Among the advantages of this crop, when sown broadcast, may be reckoned its usefulness in soiling. For this purpose, it should be sown at different times, at intervals of ten days, or so. Some should be sown quite early in the season. It may thus be found to answer excellently in midsummer, when the pastures are short, and the drought would otherwise make green food scarce. When intended for winter fodder, it should not be suffered to become too old. It should be cut before the tassel appears—well and thoroughly dried—and when put away, it should have a peck of salt to the ton. We consider corn fodder more valuable for summer than for winter feeding. The Northern sweet corn, is perhaps the preferable kind to sow: the stalk is not so hard, nor so stout, and contains more saccharine matter.

COMMUNICATIONS.

Stanfordville, August 19, 1843.

Messrs. Editors—I propose to give in this communication, a few facts which I consider worth knowing, believing that some, if not all, the readers of your paper will, at some time, be benefited by the knowledge of them.

PREVENTIVE OF WORMS IN CHILDREN.

I think it likely that we have as healthy and as lively negro children as can be found any where in the State. They are never attacked by worms or any disease produced by them.—This desideratum is secured by a free use of tea made from the tops of the Jerusalem oak weed. As soon as it puts forth in the spring, we have it gathered some two or three times a week, and have a strong tea made of it, and sweeten it with molasses, in the proportion of about one pint of molasses to a gallon of tea. The children are as fond of it with their bread as they are of milk; in fact, they always seem to be pleased when they know they are to have tea for their breakfast, notwithstanding they have meat, milk, &c. This practice we keep up through the spring, and partially through the summer.

REMEDY FOR A FISTULO OR POLE EVIL ON A HORSE.

Take a common yard or toad frog between the fingers and thumb, and rub the diseased part with the belly of the frog. The water within the frog will soon escape and moisten the place which is being rubbed; but the operator must not stop rubbing till the frog is to all appearance dead. Rubbing once a day for three or four days, I have never known to fail effecting a cure, if commenced before matter had collected. An old gentleman from North Carolina gave me this information fifteen years ago. He said he had known it tried for forty years, and had never known a failure if well attended to, and had known several cures after matter had collected.

KIDNEY WORMS IN HOGS.

We sometimes have a hog or hogs to become weak in the loins, and finally drop their hind-parts, without being able to raise them again, which, when they move, are dragged along.—This, in ninety nine cases out of one hundred, is produced by what is called kidney worms. To prevent this, or to effect a cure after a hog has (as we say) broke down, requires nothing but a free use of coperas dissolved in water and mixed with meal so as to form a dough. It will require some six or eight doses to cure a hog after he has got down. All farmers should give this preparation to their hogs several times in the spring of the year—in fact, it is good for them occasionally through the year. I had a hog down last year, dragging itself about for several days before I gave him coperas, which after I commenced soon effected a cure, and he was on his feet again. Coperas will destroy the large worms frequently found in the bowels of a hog, as well as those that are in the kidneys. One ounce or less is enough for a hog at a time, and given once a day is enough in any case. Sulphur is also good for hogs, and

enough of it will make them shed lice if they have any, and may be given without any risk of danger; or at least if there is danger in giving it, I have never found it out.

TO PREVENT RABBITS FROM BARKING YOUNG FRUIT TREES.

Mix sulphur and any kind of grease (perhaps hogs lard is the best) together, and rub it on the trees from the ground fifteen or eighteen inches up, all round. After being once rubbed it will never require repeating. When I was a boy, my father had a young apple orchard, (in Virginia,) to keep the rabbits from barking the young trees of which, it fell to my lot to tie broom straw round them every fall, until he was told to have sulphur and lard mixed together and rubbed on them. It was also my duty to prepare and make the application. It had been done about twenty years when I last saw the orchard, and there never had been a tree touched by the rabbits after the application was made, and by rubbing my hand on the trees where the application had been made till it was warm, I could distinctly smell the sulphur.

I am, sirs, yours respectfully,

JOHN FARRAR.

CULTURE OF WHEAT.

GREEN COUNTY, August 8, 1843.

Messrs. EDITORS—Your notice of the sample of wheat I sent you by the hands of a friend that was passing, in the Cultivator of the 19th of July, is now before me, and though I am not in the habit of penning communications for publication, I comply with your request therein made, and shall write as though I were talking with you in my cabin, or walking with you through my fields.

You stated that you would be glad if I would furnish an account of the character of the soil, its preparation, time of sowing, reaping, and last, though not least, the yield.

The soil is inclined to be red, though somewhat mixed with sand. The ground was last year in corn, which did not make me more than two and a half barrels to the acre. After removing the stalks, I had about six small loads of lot manure hauled and spread over the ground, which was thirty yards square. I then plowed it up with a common rooter, and let it remain so for ten or fifteen days. I then sowed about eight bushels of cotton seed, and at the same time (which I think was the 10th of December,) I sowed the wheat, broadcast, and then plowed it in with the same kind of rooters.—Nothing more was done with it until the 2d of June, at which time I reaped near two thirds of the ground, and the balance a few days afterwards. The rains, which continued for several days, injured the wheat some, and having it to change and move about, much was lost. I sowed but a small quantity, (as I stated to you,) which was an eighth of a bushel lacking a pint. From this I saved and measured five bushels and one peck, and I think I must have lost near two bushels.

Having answered your enquiries in a short way, allow me to make a few more statements which may be somewhat necessary to accompany the above note. The wheat alluded to was handed to me the last of November, by a friend in Athens, who said it should be sowed in October, and stated that the gentleman who was so kind as to send him the sample from which this was made, had been cultivating the same kind of wheat for twelve years, and that he had never seen the least appearance of smut, nor even the rust. From the small sample I sent you, you will see it is a large and fine grain, which I think would have been improved had it been sowed in the month of October. I have been sowing the little white wheat for a number of years, which is a forward wheat, perhaps as much so as any we are in the habit of cultivating. My last crop was sowed in the month of October, on the same kind of soil, under the same fence, and with the same preparations, and the wheat sowed in December was reaped at the same time, and if the grain were the same, in which there is no comparison, I would prefer the kind sent you, for I think there need be no danger of the rust, it being a very forward wheat. I am yours, &c.

A PLANTER.

MAKING SOAP.—Among other things, let me tell you to learn how to make soap. I do not know that I should have thought of naming this, if my ignorance of soap making had not troubled me exceedingly. At first I did not know the method, and depended on the old woman who lived with me, to make it. I went to her when the soap keg was almost empty, and told her we must have some made as quick as possible. "Why, law! Miss, now don't you see it ain't the right time of the moon?" I tried to persuade her that soap making and the moon were but very slightly connected, if the other part of the business was well conducted. It was, however, to no purpose—I had to wait till the "right time" came round, before I could get my soap. After this, when I had the superintendence of a large family, I was obliged to buy it by the barrel, because I did not well understand the manufacture of the article, and I was really ashamed that such extra expense was caused by my ignorance. Sometimes there was too much lime with the ashes; then again not enough: sometimes it was too greasy, and sometimes any thing but what it ought to be. I tell you my experience in the matter, so that you may learn from your mothers *now*, and not have the trouble of *learning*, when you ought to be making it. As I have given you so long a talk on the subject, I will add a recipe I found in the Cultivator. It may be of use to some of your mothers, if not to you. Mr. Tomlinson writing to Judge Buel, says: "My wife has no trouble about soap. The grease is put into a cask and strong lye added. During the year, as the fat increases, more ley is stirred in, and all occasionally stirred with a stick that is kept in it.—By the time the cask is full, the soap is made ready for use. It is made hard by boiling and adding a quart of fine salt to three gallons of soap. It is put into a tub to cool, and the froth scraped off. It is afterwards melted to a boiling heat, and a little rosin or turpentine given, which improves the quality."

Some of you will think me a most unsentimental sort of a woman, when I advise you to learn how good bread, butter, coffee, pickles, puddings, &c., are made; but you will have to learn sometime, or do worse. Work with your own hands too, even if it should tarnish their whiteness a little. A man does not consider the beauty of a soft white hand a very strong recommendation, when he finds it has been kept for show and not for use. I think a young lady should be able to scour a kettle and grace a diamond.

LUCY.

Michigan Farmer.

AGRICULTURAL SOCIETIES.

The following remarks of the Columbia (S. C.) *Planter*, on the important advantages to be derived from Agricultural Societies, are so just and proper that we cannot omit the opportunity to urge their consideration upon our readers, and we sincerely hope they will not permit such valuable suggestions to pass unheeded.

"The benefits resulting from these associations, we think, are not properly appreciated in many portions of the country.

"Agricultural Societies are eminently useful in a moral and in a pecuniary light. They excite a greater interest in devising and carrying out improvements, that otherwise might not be forced upon the attention of their members.—And thus, by inducing planters to feel more interested, a spirit of inquiry is created, which leads them to devote more time to profitable reading, than would otherwise be the case. No one who is accustomed to meet with his neighbors three or four times a year, and listens to the details of their experiments, and to the practical information which they suggest, can be indifferent to his own improvement. A planter thus stimulated to seek information on a subject, of which *knowledge is power*, becomes not only a more intelligent and thinking man, but he becomes a more practical and successful agriculturist. He finds more time to read, and less to waste in idleness and dissipation. Interested in some system of improvement he has formed—home has fresh charms for him, and his farm receives a greater share of attention. These we regard as moral advantages, resulting from Agricultural Societies, of no small consequence. And we think it can scarcely be denied, that if associations of this kind do impart this stimulus, they must tend, also, to the pecuniary improvement of their members. If *mind* is at all concerned in successful agriculture, surely whoever is stimulated, no matter by what, to improve in a knowledge of his profession, and who applies that knowledge to its practical details, must acquire greater skill. And if he does this, he necessarily reaps a pecuniary reward, exactly proportioned to his increased skill. In agricultural pursnits, there is no professional jealousy, for the success of one is not at the expense of another; and surely, if there is any avocation, in which the knowledge of each should be the common property of all, it is in that of the planter. By means of Agricultural Societies and Agricultural Papers, this is effected.—They condense the scattered rays of knowledge that, separately, afford but feeble and uncertain light, into a common focus, where they are combined and reflected back on all. The reading of one, the reflections of another, and the information derived from experience in a third, thus become the reading, the reflections and the experience of all. Hence Agricultural Societies are the cheapest and most effective agricultural schools that can be instituted, while they promote, at the same time, a social intercourse among neighbors, that contributes, in no small degree, to the pleasures of life. We will not dwell, however, on these social advantages.—Estimate Agricultural Societies by the amount of actual information which they cause to be brought forth and diffused. If they are conducted with proper spirit, committees are appointed every year, each to consider some specified subject, and after gaining all the information in their reach, to report this information for the benefit of all the members. Each member of a committee should give his views, the result of his experience on this one particular subject, and his opinions as to any prevailing practice connected with it, and the reasons for those opinions—from these the chairman should prepare his report, and submit the condensed knowledge of the whole committee. If we suppose that a very large amount of practical knowledge will not be elicited in this way, we must sadly underrate the capacities of our neighbors. There are rich mines of knowledge throughout

the country, which need only to be brought forth o give southern agriculture a higher stand than it has ever enjoyed, or ever, in fact, deserved to enjoy. This information, however, like gold, is not found in any one place in large masses. It is scattered in minute particles among the great mass of agriculturists, and to make it extensively useful and valuable, it must be collected particle by particle, submitted to the refining fires of reason and experience, and then condensed for general circulation. To collect these scattered particles, to test their value, to condense and circulate them for the common benefit, is the great object of Agricultural Societies. And that this is a practicable object, has long ago been proved, by the improvement in knowledge and in practical skill, among the members of those societies that have been conducted with even a tolerable share of energy and spirit. Can the Southern country exhibit a greater number of well informed, skilful and successful planters, than is to be found among the members of the Wateree and Monticello Agricultural Societies? We particularize these because we happen to know the character and success of the members of these two societies, better than we do those of most others. We presume that none of them would deny that they owe much of their respective improvement to the direct and indirect influence of these associations.

"We cannot drop this subject without again urging planters, generally, to exert their influence in forming and sustaining these societies throughout the State, and let them make the State Agricultural Society the common bond of union."

WHOLESOME TRUTHS.

Keep it before yourself, young man, that industry and good morals will be a passport for you in good society; and will make you respected and esteemed by the good and wise.

Keep it before yourself, young lady, that kindness of heart, a sweet disposition and an even temper, will make you an agreeable companion with the old and the young.

Keep it before yourself, young man or woman, that in a choice for a partner for life, you should look well to the habits and disposition of each other. That a young man with a cigar in his mouth, and cane in his hand, and his brains running to hair, may do very well for a beau, but is not to be compared to the plain, unpretending youth, whose heart is right, and whose common sense will not allow him to play the dandy.

That young lady who is all accomplishments, who can sing a little, dance a little, thumb the piano a little, and look fascinating at any time, may fill a place on the sofa, and be the belle of a ball room, yet if she cannot boil a pudding, roast a steak, dust a room, or darn a stocking—if her accomplishments are all for show and none for use, then ten chances to one, that the young lady who has got a knowledge of household affairs, who has been brought up by a careful mother, and is well learned in the actual duties of life, will make a better wife, and a pleasanter and a happier home.

Keep it before yourself, farmer, that you should return to the earth at least as much as you take from it—that you should make your land richer each year, nor let it wear out—that you should have a neat house, large barns, good sheds for your cattle, and show that it is your ambition to make "two spears of grass grow where one grew before."

Keep it before yourself, merchant, that a "nimble sixpence is better than a slow shilling;" that one price for goods or dealing with every person alike, is the right way to give general satisfaction; and that to secure customers and trade, you must advertise freely.

Keep it before yourself, mechanic, that punctuality is a virtue; that work promised, should always be done at the time, and well done; and then you need give yourself no fears of a want of business.—*Exchange paper.*

RECIPES.

Messrs. Editors—The following are the recipes obtained in Maryland, to which I alluded in my last:

Recipe for Dyeing Green.—Take ½ lb. of oil vitriol, 2 oz. indigo—put in a bottle and let it stand three or four days; shake it well every day; then boil a strong liquor of hickory bark; dissolve 2 lbs. alum in water, put 6 lbs. yarn in the alum water, pour all the ingredients into the dye, put it all on the fire, and boil it well. The same dye will then color 6 lbs. more of a paler green. After it is dyed, and dried, it must be washed out with good soft soap.

To Dye Red with Red Wood.—1 lb. red wood, (hacked,) 2 oz. alum, powdered; the red wood must stand twenty-four hours in river or spring water; then boil it well, and after straining, mix your alum and aquafortis, and boil it well for several hours. Mix 1 oz. aquafortis, 1 oz. block tin, in a tumbler, and set it in the sun about one hour. The above will color 2 lbs. of yarn. After being dried, wash out with soft soap.

To Dye Pink.—2 oz. cochineal, ½ lb. cream tartar, 1 lb. alum, the whole put in a kettle of soft water; then put in 6 lbs. clean yarn, and boil it well; not to be washed after being dried. I saw several very beautiful carpets that were dyed with the above recipes, and for brilliancy of color, they would compare with the finest Turkey. I was particularly struck with the substantial appearance of one carpet, and on inquiry, was informed that the filling was entirely cow's hair, carded and spun by hand; the cost was but a trifle, and a more durable looking carpet I never saw. I think the whole filling of cow's hair, all white, did not exceed two dollars for a whole carpet. Persons near a city would do well to turn their attention to the manufacturing this article, as it has generally been deemed useless. A small quantity of cow's hair, with the inferior and coarse wool, would make a carpet that would outlast any carpet that could be bought: and in these hard times, every thing that tends to economy should receive attention. Politicians may rant as much as they please as to the why and wherefore, and settle the *cause* of hard times among themselves, but when they come to the *remedy*, they will find that nothing but industry and economy will afford relief.

Yours, respectfully,
George W. Craven.

Franklin, May 13, 1843.

Southern Planter.

Let no man be ashamed to work. Let no man be ashamed of a hard fist or a sunburnt countenance. Let him be ashamed only of ignorance and sloth. Let no man be ashamed of poverty. Let him only be ashamed of idleness and dishonesty.

Laziness travels slow and poverty thumps his heels.

CONTENTS OF THIS NUMBER.

	PAGE.
Manuring, a Science	137
Bommer's Manure; Comparative Merits of Cattle	138
Indian Corn; Scraps from DeKalb County; To destroy Worms on Cabbage	139
Deep Plowing; Improvement of the Soil by Mixing; Salt as a Manure; Agriculture	140
Extract from Dr. Braxton's Address; Orchards; To make an Unproductive Tree Bear; Recipe for making Tomato Figs; Lime Water for Worms; Premiums offered by Monroe Agricultural Society; To destroy Cockroaches; To destroy Bed Bugs	141
Bommer's Manure; New Cotton; A Good Crop; Curing Fodder; A Preventive of Worms in Children; Remedy for Fistulo on Horse; To destroy Kidney Worms in Hogs	142
To prevent Rabbits from Barking Young Fruit Trees; Culture of Wheat; Making Soap; Agricultural Societies	143
Wholesome Truths; Recipes for Dyeing	144

GARDEN AND FIELD SEED.

A GENERAL assortment of fresh and genuine GARDEN and FIELD SEED, among which are the following:

Red and White Clover,
Blue and Green Grass,
Rye and Orchard do.,
Timothy and Herds do.,
Millet and Lucerne do.,
Seed Corn of every valuable variety,
Seed Wheat,
Buckwheat and Potato Oats,

Kept constantly on hand by the subscriber, all of which are offered for sale at very moderate prices. All orders, by mail or otherwise, executed with neatness and despatch.

WM. HAINES, Jr.,
No. 232 Broad street, Augusta, Ga.
August 30. 18–tf

TURNEP SEED.

A SUPPLY of the following varieties of fresh TURNEP SEED just received, viz:

Yellow Sweedish or Ruta Baga, very fine for stock,
Large Globe Turnep, } Fine
" White Flat do. } for
" Hanover or White Ruta Baga do } table
" Norfolk do. } use.

For sale in quantities to suit purchasers, by
Aug. 30 18–tf WM. HAINES, Jr.

BOMMER'S PATENT MANURE.

THE undersigned is the Agent of Messrs. Abbett & Co., for vending rights to individuals for making and using the above named Manure. By reference to the following advertisement of Messrs. Abbett & Co., the prices may be ascertained. All orders addressed to me, *post paid*, at Sparta, Ga., will receive prompt attention.
Aug. 30. 18–tf R. S. HARDWICK.

THE BOMMER MANURE METHOD,

WHICH teaches how to make vegetable manure without the aid of live stock, in from 15 to 30 days, by a course of humid fermentation set into action at a cost of from 50 cts to $4.

And also to make Compost *in a few days.* And how to make a rich fertilizing liquid called "purin," having all the strength without the acrid qualities of urine.

With the view of graduating the cost to the quantity of land upon which it may be desired to use the method, the following scale of prices has been adopted, viz:

For Gardens of any extent $6
Farms up to 100 acres 10
" from 100 to 200 acres 15
" " 200 to 300 " 18
" " 300 to 400 " 20
" over 400 acres in any one farm 25

By the remittance of the sum here specified, a copy of the method will be sent by mail or in any other mode proposed by the purchaser.

All letters of inquiry must be post paid.
ABBETT & CO., Baltimore,
Proprietors of the patent right for the Southern and Western States. aug 16

THE SOUTHERN CULTIVATOR

IS PUBLISHED BY

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And will be issued every other Wednesday, at ONE DOLLAR a year, INVARIABLY IN ADVANCE. The CASH SYSTEM will be rigidly adhered to, and in no case will the paper be sent unless the money accompanies the order.

Advertisements pertaining to agriculture will be inserted for ONE DOLLAR for every square of TWELVE lines, or less, for the first insertion, and SEVENTY-FIVE CENTS per square for each continuance.

☞ Post Masters are authorized to receive and forward money free of postage.

☞ All communications must be post paid

SOUTHERN CULTIVATOR.

VOL. I. AUGUSTA, GA., SEPTEMBER 13, 1843. No. 19.

PRIZE ESSAY.

THE PREPARATION AND USE OF MANURES.

BY WILLIS GAYLORD.

INTRODUCTION.—Of all the pursuits to which mankind, from necessity or inclination, have devoted themselves, there is none more honorable, certainly none more useful, than that of agriculture. To pursue this business successfully, knowledge, extensive and varied, is required; for although a man may succeed by following the beaten paths of his predecessors, occasion will frequently arise, when the end desired may be attained by methods much shorter than those usually adopted, if the farmer is able to form and apply them. It is here that science has, within a few years, rendered the most essential aid to agriculture. Sometimes, reasoning from well known effects to their causes, the agricultural chemist has placed in the hands of the farmer the means of producing results, always desirable, but which, under the older systems of farming, with its utmost care, he frequently failed of obtaining. Again, taking well established facts in animal or vegetable phisiology as his starting point, he has arrived at results of the highest practical importance, and is enabled to render more certain and effective the more tardy operations of nature. In no department of agricultural industry, it is believed, have the labors of science been more beneficial or more apparent than in that of the preparation and use of manures; certain it is, there is no department more deserving attention, or where an elucidation of the principles and laws that govern the growth of plants, acts with a more direct and energetic influence.

DEFINITIONS.

A definition of the term manure, may be necessary, in order to treat the subject understandingly, as different individuals use the word in widely different senses, some in a wide, and some in a limited one. A few instances of the meaning put upon the term will be given from a few of the modern writers who have adverted to this topic. Thus Dr. Leiber, in his German Conversationes Lexicon, defines manure to be "vegetable, animal and mineral matters, introduced into the soil to accelerate vegetation, and increase the production of crops." The Encyclopedia, published by the London Society for the Promotion of Useful Knowledge, thus defines it:—"Every substance which has been used to improve the natural soil, or to restore to it the fertility which is diminished by the crops annually carried away, has been included in the name of manure." Loudon, in his great work on agriculture, says—"Every species of matter capable of promoting the growth of vegetables, may be considered as manure." Professor Low, in his Elements of Agriculture, says—"All substances, which when mixed with the matter of the soil, tend to fertilize it, are in common language termed manures." Mr. Johnson, in his "Farmer's Encyclopedia," lately published, says—"A manure may be defined to be any fertilizing compound or simple ingredient added to a soil, of which it is naturally deficient."—The definitions of Prof. Liebig and Dr. Dana, two of the latest writers on the subject, do not differ essentially from those already given. Of these definitions, I prefer the most simple and comprehensive, that of Loudon, and in this paper shall consider the term manure, as embracing every substance capable of promoting the growth of plants.

CLASSIFICATION.

Manures, by some, are classed as earthy, organic and saline; others divide them into animal and vegetable, mineral and mixed manures, and some speak of them as composed only of geine or humus and salts. Others class them as organic and inorganic; but these divisions are of little consequence, as every farmer understands that manure is the result of decomposition or change; and that, whether organic, that is, derived from animal or vegetable matter; or inorganic, such as the earths, clay, lime, the alkalies, &c.; it is only efficient when presented to plants in certain forms, such as decomposition, division or solution. In France, they have terms to distinguish those substances which act mechanically in improving the texture of the soil, from those which act directly in the nourishment of the plant. The former class of substances they call *amendments*, and the latter class *engrais*. It is probable, however, that the system which considers all manures as consisting of humus or geine, and salts, comprehending, in the latter term, all the mineral substances that enter into the growth or nourishment of vegetables, will effectually be found the most simple, and at the same time the most accurate of all the proposed divisions of manures. Thus humus constitutes the source of the carbon, forming the principal part of the structure of plants, and the salts, where they do not enter into the structure of plants, are active in preparing the other inorganic elements, and exciting the vegetable organs in their reception and appropriation of nutriment.

HUMUS OR GEINE.

Humus or geine is simply decomposed animal and vegetable matter; and as from it, by the action of oxygen, carbonic gas is derived, to be absorbed by water and taken up by the roots, or mixed with the atmosphere and taken up by the leaves of plants; or, as some agricultural chemists with good reason suppose, is under certain circumstances dissolved, or is soluble, and thus rendered fit for immediate nourishment to plants, it must be considered the most important item in the production of manures. The salts, which are the most efficient in aiding vegetation, or the most active manures, are those formed from the alkalies and their various combinations.—Thus, from pure lime or calcium, is formed, by the union with carbonic acids, *carbonate of lime*, with phosphoric acid, *phosphate of lime*, the base of bones, one of the most efficient of fertilizers; with sulphuric acid, *sulphate of lime*, or gypsum the value of which is well understood; and so with the other alkalies, which, in their combinations, form substances of the utmost consequence to plants. It is well known that the outer covering of some kinds of cane, contain so much flint or silex as to strike fire with steel; and some of the grasses contain this substance in such quality that their ashes will melt into glass with potash. Now, this hardness, so necessary to their perfection, could not be attained unless this flint had been rendered soluble by union with an alkali, forming a silicate of potash, and by this solubility been rendered fit for the action and appropriation of the plant.

FOOD OF PLANTS.

If we would know what kind of food is required by plants, one of the first steps necessary is to ascertain of what the plants themselves are composed. The combination of matter may be said to be absolutely endless; but the original elements of this multitude of combinations, are few in number. Chemistry has detected only some fifty-five substances incapable of further reduction, or what are called simple substances; and of these, strange as it may appear, only four, except in proportions merely accidental, go to the formation of plants. Of these the first is *Carbon*. This forms from 40 to 50 per cent by weight, of the plants cultivated for food; and is therefore most important to animals and to man. The second of these simple substances, is *Oxygen*. The quantities of this substance are immense; and though we are acquainted with it only in the form in which it exists in the air, nearly one half of the solid crust of the globe, 21 per cent of the atmosphere, eight pounds in every nine of water, and more than one-half of the living bodies of all plants and animals, are oxygen. *Hydrogen* is the third substance peculiar to plants. This is the lightest of known substances, and forms a small part of the weight of all animal and vegetable bodies; constitutes one-ninth part of the weight of water, but enters into the composition of none of the masses that go to form the crust of the globe, coal excepted. The fourth simple substance, entering into the formation of plants, is *Nitrogen*. This forms 79 per cent of the bulk of the atmosphere, constitutes part of most animal and some vegetable substances; is found in coal to the amount of one or two per cent, but does not exist in any other of the mineral masses constituting the crust of the globe. Although not an abundant substance, the importance of it is not the less decided, and some of its functions are of the most indispensable kind. Plants then, are composed of carbon, oxygen hydrogen, and nitrogen; the first derived from carbonic acid, the second from the atmosphere, the third from the decomposition of water, and the fourth from ammonia absorbed by water, and taken up by roots of the vegetables. Some of the earths are occasionally detected in plants, and salts of some kind are always present. In the preparation of manures, the principal object to be aimed at, it is evident, must be to supply the materials needed to furnish the carbon and the ammonia; and these are found in the greatest abundance in dead or decomposed animal and vegetable matter.

LAW OF NUTRITION.

It seems to be a law of nature, that the higher the grade of the animal, or the more complicated its organization, the greater the necessity of a corresponding degree of organization in the substances used as food; indeed the matter in which the crude materials, found in the earth and almosphere, are worked up by plants into a state suitable for conversion into the flesh of animals or food for man, exhibits the strongest proofs of benevolent design in the formation of such grade of organized matter. Man can, indeed live, live on plants, but his teeth demonstrates that flesh was to constitute no inconsiderable portion of his food. As all animals receive their food, either directly or indirectly, from the vegetable kingdom, it is evident their excrements, or their decomposed bodies, must form manures of the most valuable kind; and and it is to this source, the excrements of animals, that the farmer must look for his supply

of manures to restore the fertility of the soil. In treating further of manures, it will be best to begin with this, as the most important class.

ANIMAL MANURES.

A late British writer on agriculture, says—the chief use of cattle on an arable farm, besides those necessary for the operations of husbandry, is to produce manure for the land. If the cattle repay their food, and the expense and risk attending their keep, the manure is sufficient profit. Even with a moderate loss, they must be kept, when manure cannot be purchased. The loss, if any, on the cattle, must be repaid by the increase of the corn crops. Manure is to a farm, what daily food is to an animal; it must be procured at any sacrifice."—Common barn-yard or stable manure is the kind to which most farmers must look for the fertility of their farms. This consists of the droppings of the cattle, mixed with the straw used for littering in stables or thrown into the yards for the animal to feed or lie upon, the coarser hay and weeds refused by the stock, and the urine of the animals kept in the stables or yards. This is constantly trampled, is usually kept moist if not wet, and is finally decomposed, or converted into manure fit for the production of crops. This is the most usual course, but it is evident that there must, in this method, be a serious loss to the farmer, of the more valuable properties of the manure. In this way, the decomposition is unequal; a part will be converted mould while the other will be scarcely acted upon; the salts and the more soluble parts of the excrements, which are the most efficient ones, are dissolved by the rains, and carried off by the drains, or lost in the earth; and where any considerable degree of heat is evolved, as there will be when the decomposition is rapid, or is going on in large masses, the escape of ammonia, so easily detected by the smell, shows that the nitrogen, so essential to the growth and perfection of a grain crop, is rapidly wasting.

PREPARATION.

To prevent these results, and secure the whole benefit of the manure, two methods have been adopted. The first consists in applying the manure fresh, or in a long state, to the fields it is wished to manure, without waiting for it to decompose. In this way the manure collected in the yards during the winter, is removed in the spring, and applied to such crops as require it the most; and as no fermentation ensues in ordinary cases, until the commencement of hot weather, two sources of loss at least are avoided, those of the washing away of the soluble parts, or their being carried off in the shape of gas. Where there exists no necessity for retaining manures for other than spring crops, and where crops cultivated are such that long manures are suitable for their growth and tillage, this mode of disposing of manures must be considered one of the best that can be adopted. But in many cases the formation of manures in the yards and stables of the farmer is going on the whole year; and preservation in masses, or by being scattered in yards during the hot months, would be to greatly lessen, if not mostly destroy its value. Besides, there are some crops, such as some of the root crops, in the cultivation of which experience has proved fully that rotted or decomposed manure is far preferrable to long manure, as much of it is already in a soluble state, and is available to the plants at the time they need hastening the most, which is the period immediately after germination. When the waste of manure is to be prevented during the summer months, or it is desirable to provide a quantity of fully rotted manure, then the second method should be used; and this indeed, by many excellent farmers, is considered the best in all cases.

FERMENTATION.

In this method, the practice is to remove the dung from the stables and yards at short intervals, and place it in large piles or masses, that the proper fermentation may take place previous to its use. When a pile of manure is made in this way, the fermentation takes place in the quantities applied, as they are successively deposited, and therefore does not reach usually that point in which material loss is sustained. If it is found that the heat is becoming too great, or the fermentation injuriously rapid, so as to cause the escape of ammonia, a layer of earth or sods placed over the pile, will retain, by combination, the escaping gases, and thus prevent the loss. It has been found a most excellent plan, one which not only greatly increases the quantity of manures made in this way, but adds to its quality, to mingle with or cover the successive deposits of manure with earth from ditches or ponds, peat or muck from swamps, or turf from bogs or plowed lands, as such layers, consisting mostly of vegetable or animal matters, will by absorbing the drainings of the manure, or the absorbtion of the escaping gases, be converted into one of the most efficient of fertilizers. The more solid such deposits of manure are made, the more slow will the fermentation be, and hence in unloading, the carts or wagons may be driven over them if necessary to expedite the work, where the immediate use of the manure is not an object. Should the dung placed in these heaps be too slow in fermenting, it may be hastened by opening the piles, or still better by making a hole in the top, into which the wash of the yards and the urine of the stables may be poured. This method has another advantage. The manure from the yards if not wanted as long manure, may be removed to the fields where it is to be used, at times when the men of the farm cannot be otherwise profitably employed, and will be at hand, ready fermented in these piles, when a further transportation might be difficult if not impracticable.

LONG OR ROTTED.

It is a question of considerable importance to the farmer, and one which has been much discussed, whether it was better to apply manure in its long state always, or always allow its full decomposition before using. From his own experience, the writer has been led to doubt the correctness of either of these positions. It seems to be universally admitted that matter, to be efficient as a manure, must be soluble, and it is clear that the more solid parts of farm yard manure require to be softened by putrefactive fermentation before they can be considered in this state. When, then, the influence of manure required to be felt at once, as on the turnep, beet or carrot crops, in order to push them forward at the first start beyond the reach of insects, my experience is, that the manure should be in a state reducible to powder, in which condition a large portion of it may be expected to be soluble, and of course at once available by the plant. Where, during the fermentative process, the mass has been reduced to a black carbonaceous matter, it may be inferred that the heat was too great, and the manure seriously damaged; on the contrary, if the mass, while pefectly fine, dry and friable, still retains its dark brown color, it will usually be found that none of the good qualities have been lost by over-fermentation.

But where the manure is to be applied to crops which do not require forcing forward in the early part of their growth, but demand as much or perhaps more nutriment at a late period of their vegetation to perfect their seeds or roots, than experience has shown that it is best to apply the manure without any considerable fermentation to the soil. Indian corn, potatoes, and he grain crops generally, are of this class; the two first particularly. The time when corn and potatoes require the most nutriment, is at the time when the ears and tubers are forming; and when manures but partially fermented, or used fresh from the yard or stable, are applied, the decomposition is comparatively gradual, and the supply greatest when most needed. I cannot recommend the application of manures of any kind directly to grain crops, as it has a tendency to give straw at the expense of the grain, and wheat so manured, is far more apt to suffer from mildew or rust, than when the manure, by application to other and previous crops, has become perfectly incorporated with the soil. In this state, that rapid growth, which the result of first fermentation, is avoided by the wheat plant; and the substance necessary to perfect the berry are already prepared and within reach of the growing or maturing plant.

Dung varies much in its quality, not only from the perfection or imperfection of the fermentation to which it is subjected, but also from the animals producing it, and the food which animals receive. The richest and most effective manure we have ever used, was that from the hog yard, and produced by fattening hogs. That from cattle, fed on corn meal and oil cake, will be little inferior; and either will be found 100 per cent better than ordinary farm yard manure. The reason of this is very plain. Such animals are fed with substances abounding in the materials most needed by plants, with very little admixture of useless matter, and the comparatively small quantities of animal matter and salts added, rather contribute than detract from its efficacy. The dung of sheep is more valuable than that of horses or cattle not fattening, as the materials are more perfectly assimilated or mixed in mastication, and more fully decomposed.

GREEN CROPS.

Next to farm yard manures, to keep up the fertility of his lands, the farmer may most certainly rely on green crops, either fed off upon the land, or turned under by the plow, and there allowed to ferment and decompose. For a plant to enrich exhausted soils, affording as it does both top and roots to a large extent, there is no plant equal to clover; and particularly where it is necessary or desirable to have the green crop fed off by animals. I prefer letting the clover grow until nearly or quite in blossom, and then turning sheep upon it. They will eat much of it and fatten rapidly; but they will trample down more, and mixed with their dung forms in its decay a most efficient top dressing; and repeated for two or three years, forms an admirable preparation of the soil for wheat or other grains. When a crop is cultivated to be plowed in, it should be done at the time when the plants contain the greatest quantity of nutritive matter, and have least exhausted the soil in which they are growing. This, in most cases, will be when the plants have come fully into flower. At an earlier period there may be as much weight, but a larger portion of it will be mere water; and if allowed to stand much later, the soluble matter is lost in the seed, and the ligneous part of the stem becomes more difficult of decomposition. Buckwheat is a good plant for a green manure; its growth is rapid, and gives a great weight per acre, and two crops may be plowed under in a year. The best way of plowing in such green crops, is to pass a heavy roller over them, which lays the plants close to the ground, and greatly facilitates covering them by the plow. It is believed that corn, sown broadcast, and when just showing its tassels, cut and covered by the plow, would be one of the best crops that could be chosen for this purpose. A man or boy in this case, would be required to follow the plow, to place the corn in the furrow for covering, at the next passage of the plow. Taken at this time, corn abounds in nutritive matter, and could scarcely fail of proving a first rate fertilizer of the soil.

PEAT.

A variety of decomposed vegetable matters, or those partially decomposed, are used as manures. The fallen leaves of trees are of this class; but the instances are few in which they will repay the expense of gathering; perhaps never in the United States, where the other sources of an abundant supply of manures are so numerous. If collected, the best method of using them, is to litter stables, or form beds for pigs, or mix at once with other manures; as in such ways, they absorb urine and other fluids that might escape, and together undergo decomposition. But the most important source of decayed vegetable matter, and one, the value of which is not yet by any means sufficiently un-

derstood or appreciated, is to be found in the great deposits of this substance in swamps, low meadows, and peat bogs, in all parts of our country. On the subject of this kind of manure there is no authority equal to Dr. Dana, of Lowell, Mass. According to him, peat consists of soluble or insoluble geine or humus, with a few salts. From an analysis of ten specimens from different parts of Massachusetts, the highest and the lowest in the scale of soluble geine, is selected and given here, as well as two specimens of pond mud. This is done, as the value of neither peat or such mud is sufficiently appreciated by the farmer; and they are neglected when they might easily be made a source of the greatest fertility:

	Soluble Geine.	Insoluble Geine.	Total Geine.	Salts and Silicates.
Peat.	10.15	49.45	59.60	40.40
	48.80	43.60	92.40	7.60
Pond mud.	5.10	8.90	14.	86.
	8.10	6.50	14.60	84.40

COMPARISON WITH COW DUNG.

In his analysis of various manures, he takes for his standard cow dung; and it is not a little remarkable that the constituents of peat and cow dung should so nearly coincide. Dr. Dana's estimate of the several parts of peat of average quality, and of cow dung is as follows. The peat was fresh dug, in this case; before, it was dried at 300°.

	Peat.	Cow Dung.
Water,	85.	83.60
Salts,	1.	95
Geine,	14.	15.45

PEAT COMPOSTS.

But notwithstanding this decayed vegetable matter is so rich in the organic elements of plants, experience proves that, applied in its natural state, it is almost valueless as a manure, compared with stable manures; and hence the reason it has been so little prized. Science has shown the cause of this result, and the means of obviating it; or in other words, of unlocking the fertilizing powers of these vegetable deposits. To be able to give out ammonia, the peat or swamp muck must be fermented; and this may be effected by the direct addition of alkalies, or by making the peat into a compost with fresh manures. If alkalies are added, the quantity necessary to bring a ton of fresh peat into the same condition, so far as regards ammonia, as cow dung, would be "92 lbs of potash, 61 lbs. of soda, or 16 to 20 bushels of common house ashes." But the farmer will usually find the best method of using peat, will be to combine the peat with manure, by mixing it with dung in his yards, or making it into compost. Many experiments have been made by some of the best farmers and gardeners of Massachusetts, in relation to the use of peat; and all unite in pronouncing it most valuable. Mr. Phinney, of Lexington, says, that "a cord of green dung converts twice its bulk of peat, into a manure of equal value to itself; that is, a cord of clear stable dung, composted with two of peat, forms a manure equal in value to three cords of green dung." Mr. Robbins, of Watertown, though owning a large stock, makes no use of their manures. These he sells; but keeps his farm in a high state of fertility, by mixing swamp muck or peat with spent ashes from his soap and candle factory. The proportions he uses are, one part of spent ashes to three of peat, dug up in the fall and mixed with the ashes in the spring. After shovelling over two or three times, it is spread and plowed in. The effect is felt at once; and so far the manure has proved durable.

(To be continued.)

SAVE YOUR SOAP SUDS.—There is scarcely a plant that is not benefitted by watering with soap suds. It furnishes nutritive matter as well as moisture; keeps off insects, and promotes a rapid growth. The Gard. Chronicle states that while there has been a great failure in the cabbage and cauliflower gardens generally, those watered with soap suds have produced plants of the finest quality, and entirely escaped the injuries inflicted by insects upon others.

CRUSHING CORN—CORNSTALKS.

MESSRS. GAYLORD & TUCKER—I do not intend passing another winter without a corn and cob crusher. During the winter of 1840-41, I hauled my corn to a bark mill, run it through, and then hauled it ten miles to a grist mill, and got it ground coarse, and never but in one instance did I get my grist without going twice for it. This you will say was paying dear for the whistle, and so it was; but I thought it paying dearer still, to see my working cattle voiding unmasticated, full one-half the corn they ate.

In 1841-2, I hauled my corn to a steam mill in town, and paid one-sixth for toll, besides paying $5 to get the thing started; and I foddered 26 head of cattle and young horses on cornstalks cut up at the roots before frost, on to which, after being run through a patent cutting box and well wet, was put from two to four quarts per day to each head, of corn and cob meal. My cows gave milk all winter, and nearly up to calving; and all my neat stock, with one or two exceptions, would, if any accident had happened to them, have been ready for the butcher.

I saved $400 in wintering my stock, admitting hay to be worth $14 per ton, which was the case here that winter. I have a portable horse power, which I think will turn the crusher, and stormy days in winter, my help can be employed in grinding, instead of keeping under the feet of the women, who must necessarily be employed about the house. Yours, truly,

Maumee City, O., 1843. J. W. SMITH.

P. S. Will the gentleman of Hereford Hall, please favor me and the public, through your paper, with the particulars respecting his mode of raising calves, and especially the manner of making flax seed jelly, from the beginning until it is ready to feed. Will ground oil cake do as well?

J. W. J.

Albany Cultivator.

USE OF SALT.

MESSRS. EDITORS.—I see it stated that common salt, (muriate of soda,) is coming into use largely in England, as a manure. We have around a salt manufactory at this place, a large quantity of refuse salt, with which we could very easily test its virtues. I am however, ignorant of the quantity per acre used on land, and of the mode of using it; also on what soils, and on what crops it is found to be the most beneficial. Any information on this subject will be gratefully received. S. F. VINTON.

Athens co., Ohio, 1843.

In England, salt is generally applied to the wheat crop, and is spread on the fallow, "some time before sowing in quantities of not less than ten, or more than twenty bushels per acre." The use of salt does not appear to increase the bulk of straw, but the ear is better filled, and the grain plumper and heavier. Another mode of applying salt, is to take quick lime and slake it with strong brine. This should be done a month or two before it is required for use, and then mixed with swamp muck, or earth, before spreading on the soil. Lime so prepared, is said to produce a capital effect. From the experiments made, it appears that light or gravelly soils, are those most benefitted by the use of salt.—*Albany Cultivator.*

CLOVER.—The impression in this region is general that Clover cannot be successfully cultivated. The secret of cultivating this crop consists in *deep ploughing, careful sowing* at the proper season; and the judicious *shading* of the tender plant from the early heat of the summer sun, until its tap root has struck so deeply into the earth as to reach the point of perpetual moisture. The soil must have a clay foundation, so as to retain water—it must be well cultivated, loose and free from other grasses. It must be productive and well limed, or plastered. It ought to be sowed 20 lbs. to the acre, on a wheat crop, after that grain is fairly set, and during the winter months. Thus it will be protected until the month of June, after which it should by no means be pastured until the second year.—*Augusta Washingtonian.*

MILKING.

That a mineral loss is sustained by the dairyman, from the manner in which the process of milking is usually performed, there is no doubt. In milk, the most valuable part is the lightest, as we see from the cream rising to the surface of the vessel; and it is reasonable to suppose that the same relative position is maintained in the udder as in the pan or pail; that is, the cream or richest part is in the highest of the lacteal vessels, and of course, is the last to be extracted in milking. When this operation is carelessly performed, or, in other words, the cow is not milked clean, the best part is left in the udder, and lost to the dairy. It may be said, however, that what is left at one time is obtained at another, and is not therefore lost, but it must be remembered that the process of absorption is constantly going on, and that by leaving the richest part for this action of the vessels, it is irrecoverably lost; and besides, the more completely the vessels are emptied the greater the secretion will be. I do not approve of this dripping or stripping, as it is called; for the quicker a cow is milked and milked clean, the more milk she will give. All dairymen are aware of the fact, that to dry a cow, nothing more is necessary than to only partly drain her udder at each successive milking, that is unless we leave off entirely. I do not speak without knowing. We have had hired help for several seasons past, and they generally milked, and it was enough to have worn out the patience of man in waiting for them to milk their number of cows. I don't wish to be understood that all are alike, but in too many instances it is the case. The milker should be instructed to milk as fast as his strength will allow; and the idle or slow milker would at once be discharged from this branch of the dairy. While some will milk from twelve to fourteen cows an hour, others do not, I won't say cannot, milk more than eight cows an hour. I have had experience enough, although young, to know something about milking, and how quick a cow can be milked. It is by attention to minute things that most of the profits of the farmer are realized, and we are confident that by attention to this point, non-essential as it may appear, the dairyman would find an important addition would be made to the sum total of his annual profits.

WESTERN.

New York Farmer.

FLAX SEED.—OIL.—The Genesee Farmer says great attention has been paid this year to the culture of Flax Seed in Western New York, for the purpose of making oil. In Seneca county alone, more than 1000 acres have been put down to flax, solely for the sake of the seed. Several oil mills are now erecting in that quarter.

The oil makers furnish seed for sowing in spring, and contract with the farmer for the crop when harvested, at $1 per bushel. The yield is from 10 to 15 bushels per acre: and farmers find the crop more profitable than wheat or oats. It is sown early in spring, on good dry land, half a bushel of seed per acre. It ripens in August, and if raised merely for the seed, is harvested and thrashed like other grain. But when the stalk is used, it is pulled up by a machine as soon as the seed begins to ripen, and bound in small bundles, the seed stripped off by a machine and the stalks spread out and dew rotted. It is then sold to the hemp makers for $7 or $8 per ton; which is said to more than pay for all the extra trouble. An acre yields about one ton of stalks. When the land is in good condition, wheat is commonly sown after flax; but this will not answer on poor land.

MAXIMS.—Never expect your lands to give you *much* if you give them *little*; nor to make you *rich* if you make them *poor*.

To 'save at the spigot and let out at the bung,' will soon empty the largest hogshead, so will economy in small matters and waste in large ones, speedily squander the largest estate.

MANAGEMENT OF FRUIT TREES.

Messrs. Editors—The article in the June number of the present volume of your paper, headed the Peach Tree, requires some notice, and probably a much more extended one than my time will admit of at present. In the first place, allow me to say, that the disease of the peach tree, called and known as the yellows, is not contagious, and I will hold myself ready to prove, not theoretically or speculatively, but practically, that there is no such thing as a healthy peach tree being infected by another, standing adjacent and having the yellows. I will not say that this or any other disease cannot be innoculated; but if it can, I have not been able to do it in several experiments made for the purpose.

I will endeavor to detail some of my experiments and observations in regard to the yellows, &c., and believe that I can show it to be the result of error in their culture. This farm had upon it in 1836, a small apple orchard, the trees standing at distances of 32 feet; between the rows of apple trees, peach trees were planted at distances of 16 feet, tree from tree. The peach trees were in a very unhealthy condition, some of them being in the last stage of the disease called the yellows, ceased to live after that year; others not so bad, but having the disease in its worst form, every part of the tree being affected, received my care and attention. My first desire was to get rid of the peach worm, which I readily accomplished by the use of salt and saltpetre around the trunks of the trees, &c., and at the same time I gave to those trees producing good fruit, a top-dressing of manure. In 1838–'39, my orchard was entirely free from the worm, and appeared in a healthy condition, with the loss of only three trees out of about forty that had the yellows.

The orchard being in good health, I resolved to test my then theoretical views; having planted a few trees to supply me with fruit, in case these should be destroyed, I went more cheerfully to work and selected eight trees standing in a row, had the ground manured for about ten or twelve feet on each side of the row of trees; it was then ploughed, and potatoes were planted in every third furrow, this furrow receiving an additional quantity of manure. The balance of the orchard was ploughed during the month of September; a part thereof received a dressing of manure and was ploughed in; another part was manured after being ploughed, and a third part without manure; the whole orchard was sown with wheat, and the following spring with clover. The effect was that a large majority of the peach trees showed some symptoms of disease, but more perceptible on those where there was no manure, where the manure was turned under, and where the potatoes were planted. Of the eight trees where the potatoes were planted, I was resolved on saving four of them if possible, for here I thought the greatest amount of injury was done, (though I have thought differently upon the subject since,) yet in this case the injury filled my fullest expectation, and the four trees unattended to had the yellows and were about to die, when Mr. J. L. McKnight and a friend of his, both living in or near Bordentown, New Jersey, and both peach growers, came to see my orchard; these gentlemen, pointing to three of these trees, asked if I could cure them, I told them it might be possible, but they were very far gone; their remark was that they thought these trees could not be restored to health. The middle one of these three trees being most diseased, was selected by me to be cured, and if Mr. McKnight and his friend will call and see me in September next, I will promise to give them some perfectly sound fruit, to be gathered from this tree, tho' the fruit is not of a very good kind. The other two trees died for want of attention, and were cut down this spring. Now this is one instance, of which I have ample testimony, of this disease being curable; though it is not the first instance of cure with me by very many. The disease was produced by the plough, and the cure by rest, with a top-dressing of stable-manure and ashes.

I deem it unnecessary to say anything more about my orchard at present, but beg your indulgence to permit me to ask attention to the effect produced from ploughing orchards. A person living within two miles of me has an apple orchard that was, to within the last three years, a most prolific orchard, but in consequence of some of the trees putting on the appearance of decay, he thought that to manure it and plough it would it would be of service; this he did three years ago, and the orchard producing no fruit the next year, and the trees appearing more unhealthy, he manured and ploughed again; but still he has no fruit, and his trees are growing worse instead of better. Another person about seven miles distant, has an apple orchard that he had worked in corn three years ago; one of his people being at my house the following year, I inquired if there was any fruit on the trees: "No! the frost has killed all the apples." I then asked him about trees standing in different parts of the orchard, where I knew they could not plough, and was told that these trees were full of fruit and that the "frost did not hurt them." I desired him to say, the next time he was asked why these trees were full of fruit and the others not, that they could not injure them with the plough. I could give very many instances of this kind, but my object being to call attention to this matter, I will ask every one to make his own observations and comparisons; let every farmer look into his neighbor's orchard and his own, and see what the effect of ploughing is when compared with the unploughed orchard adjacent to that ploughed; let him call to recollection the fine orchard planted by his father, that is going into decay, and ask himself the cause, and he will receive more knowledge upon this subject than could be derived from volumes written upon orchards, though I would strongly recommend the perusal of all works written upon the subject of our business, the avocations of life are always promoted by a proper and strict inquiry after truth, and no agent should be neglected to the advancement of so desirable an end.

My system is to work a tree just as I do the corn plant; the one is an annual, the other is a perennial; give the tree all the cultivation it is to have while young, and before a set of organs are wanted for the perdurable formation of fruit, and when the tree puts on the appearance of premature decay, I give to it a coat of manure spread upon the surface of the ground; this I apply in the fall of the year, always preferring long to short manure, and when ashes are deemed necessary, I have put them on in the spring.

Shall I say a word here about peach trees 30 or 40 years ago, which Mr. Downing represents to have grown anywhere in the United States, south of forty-three degrees of latitude. Well, forty years ago there was but little demand for peaches as a market fruit, and they were for the most part converted into pork and brandy. For these purposes it did not answer at that period of time, to pick them off the trees by hand, but a neat grass lay was considered as indispensable to facilitate their collection, as step-ladders are at the present day. The peaches then were shook off the trees, and the best selected either for drying or the still, and hogs disposed of the balance.

There were several reasons why orchards were not destroyed at the time by tillage, and perhaps the most prominent one was, that a grain crop in the orchard would prevent or retard the gathering of the peaches, which, by the by, were worth more than any grain crop that could be grown in the orchard; but whenever an old peach orchard was ploughed a few times, a new one had to be planted, or at least such was the case 30 years ago, on some farms, to my certain knowledge. I do not wish to be understood that the peach tree can be grown at the present time with the same facility it could then, for I have no doubt that the pabulum necessary for the support of this tree has become in a great measure exhausted from the soil, but I presume it can be restored; if so, we must get "the neighbors" to resuscitate their soils, and to form a good stock by proper tillage; but when the trees come into full bearing, we must then feel satisfied with whatever nature may be pleased to do in the premises, for any stirring of the soil after this period of growth is obtained, has a tendency to bring the orchard into decay, of which I can show hundreds of surviving witnesses.

A careful inquiry will show that the peach tree began to decline about the close of our last war with England; grain commanding a very high price at that time, peaches were only considered in a secondary point of view; and orchards that probably had not been disturbed with the plough for 15 or 20 years previous, were then put in wheat, corn, &c. This soon brought the orchard into decay, and in many instances they were not replaced; and when replanted, they have been treated very differently from the original. We must now have a crop of grain, grass or roots, but in former times such things were not expected from a peach orchard, after it began to produce full crops of fruit.

You have told us how to plough, manure, work and embellish our lands, to gather and secure our crops, with a long list of etceteras, but there is one matter that I think is overlooked, and requires more attention than appears at first view—and if not the base of Mr. Comstock's proposed system for his million of dollars, is and has been mine for years; and that is, how long a plant can be cultivated without injury to the growing crop, or at what stage of growth should we cease to work a plant to obtain its greatest yield.

I have heretofore given my views in regard to Indian corn, and I will now give some experiments made several years ago for my own satisfaction; but there has been no repetition of these experiments, as they fully corresponded with my views before making them. 1st. Two double rows (25 yards in length) of peas were planted, with an alley of three feet between the rows; they were all hoed when the pea-vine was about eight inches high, and at this time supports were placed to one of the rows. The other row was left without supports till the first blossoms made their appearance, when it was hoed again and then stuck. The pea-vine in the first row attained the height of about three feet six inches, and bore abundantly. The row hoed, when coming into bloom, attained the height of about twenty-eight inches, and the crop was not equal to one-fourth of the first row. 2d. Two double rows of bush beans were selected and treated with the hoe in like manner, but here the result was somewhat different; the hoed, when coming into bloom, were checked in growth; but in a few days new branches began to push forth, and upon these branches the beans were good, but on the first branches the pods were short and defective, and the crop not equal to the first row. The roots of some of these vines were carefully examined, but to speak of this part of the plant in this communication, would not only extend this article to a great length, but would be out of place, and I will conclude this exposition by saying that a similar effect was produced in the yield of the crop, upon two rows of potatoes treated in like manner.

Having laid by (to use a common phrase) a young peach orchard of over 600 trees, I may in due course of time have to recur to this subject again. Lyttleton Physick.

Ararat Farm, Md., June 28, 1843.

Albany Cultivator.

Tomato Sauce.—Take ripe tomatoes, cut them in two, press out the pulp and separate the seeds; then put them into a skillet with some savory sauce and a little salt. When of the thickness of pea soup, rub it thro' a coarse cloth, boil it to the consistence of marmalade, put it into jars, and in a day after it pour over it lard or butter, and tie down with oiled paper.

MANURING COTTON LAND.

The following we copy from the South Western Farmer, and we presume it is from the pen of M. W. Philips, Esq., one of its editors. It illustrates as strongly as a single experiment can, the incalculable benefits of manuring cotton lands. We commend it to our readers;

We feel disposed to give some description of the portion of our cotton crop that was manured this season; not believing the present appearance sufficient, to induce our brother farmers, to go into the manuring business, on the ground that there may be some peculiarity in the season that has made the crop more favorable, or the manured portion may not even yet give such a yield as the residue.

We hold one thing proper in farming, no experiment should be considered valid until tried three years at least, and then the exact returns should be given; though there can be no exception taken to one who gives his opinion *from present experience*, thereby putting one on his guard, as much as selling property and refusing to warrant soundness.

On giving this part of our crop its last plowing on the 8th of July, it was done at some injury, from the unavoidably breaking of some of the limbs that had in many portions of it met across the rows. There are portions of the field, of the same row, frequently at a less distance than 6 feet, that one stalk has not as many bolls or forms as a limb has on its neighbor, where manure had not been applied. On a very poor piece, where what little soil ever was has been gone for ten years, the cotton will show with any on the place; and yet portions of it, where the manure was accidentally not spread, is now not over a foot or a foot and a half high: a half dozen large bolls would quite break down the plant. In other words, where the manure was sufficient, the crop promises for a rate of 15 to 20 hundred weight, and within 10 feet, the crop planted same hour, and worked always the identical time and manner of the other, will not, cannot, produce 500 lbs. per acre. We have shown it to a number of persons, who have favored us with their company. They agree that appearances speak in the loudest manner in favor of manure.

Our object in speaking of it at the present time is, that all who have such land, can commence so soon as their present crop is off hand, to prepare manure, and that they may come and judge for themselves. When we used the manure on our land, it was prior to the appearance of Dr. Cloud's article, and was done to improve the piece of land (24 acres) that we design for an orchard, though fully believing the gain of the crop would amply reimburse. Not prepared for so great a difference, we did not give room enough; nor having a present return so much at heart, we did not use care in scattering the manure.

We have a small portion of this same field, that was manured in '40, '41 and '42—and no portion of it but what shows a marked improvement. A and friend myself counted on the 15th of July, 12 distinct forms and bolls on one limb, on the land where manured in '41—whereas on an adjoining row, we entertain no doubt 15 to 20 was not on a plant.

We have even now been preparing for manure, and would be happy, if we could know that our neighbors every where had buried enough grass to "do likewise"—but fear cotton picking will catch some of them burying the thing. Take warning friends, and the next year buy two horse-plows, and good single plows; though they may be heavy and require hard work. Yet you will gain *sometimes* a month's work in July and August, besides having your crops in good order earlier. We anticipate not to run a plow after the 19th or 20th —though we would if we could, not to injure the cotton—by breaking it.

We give this not as any thing new, and only to awaken attention to the matter; were we to advise, we would say use manure in abundance to a corn crop; it is an essential one; follow this crop with cotton, having the corn stalks buried with a two-horse plow; this plan would give the cotton crop great advantage, and would ensure a bountiful crop of corn, which would feed more stock, make more manure, and thus enable you to give land its due—an occasional feeding.

THE IMPROVEMENT OF THE SOIL, &c.

We recollect when but a boy, seeing an old plantation on the Catawba river, containing some two or three hundred acres. It was then regarded as exhausted land, and consequently its fences were suffered to rot, or were burned, and for many years it lay out as forsaken. But at length it fell into other hands, and an effort was made to reclaim it. About one hundred acres were first enclosed, and with a large two horse plough it was thoroughly broken up, early in the fall, turning under all the vegetable matter while green. In this condition it lay until about the first of February, when it was again well broken up, with the same big plough, after which it was prepared and planted in corn for one year, and produced probably as fine a crop as most new land with the first crop. We believe there was very little, if any manure, put on this land the first year. After the corn crop was gathered, this field was sowed in small grain, and produced a very fair crop; when this came off, the land was broken up as at the first, and lay thro' the winter as before. What method has since been pursued with this land, we are not able to say. But after being in constant cultivation now, for fifteen years, when we last saw it, about eighteen months since, it still produced equal to the best Catawba lands. All the old fields belonging to the plantation had long since been brought under the same treatment, with the same success; and some two years ago, this same land, which when a boy we were taught to regard as worthless, sold for $20 per acre, thus showing what may be done with proper skill, combined with persevering industry. In this instance our heart was made glad to see the noble forest, still standing almost entire, in the neighborhood of these once old fields, that were now "covered with the smiling corn."

Much has been said against "book farming," and we very well know that book knowledge will not make corn grow, but we also know that agricultural knowledge, united with agricultural industry and perseverance, will, as it has done in many cases, convert the barren desert into a fruitful field; while industry without skill, will certainly convert the most fruitful field into a barren waste, as we have seen in hundreds of instances over the upper part of our fair Carolinas and Georgia.

We suppose that old Virginia family, where that time honored rock has been kept from generation to generation, to be put in one end of the bag when they go to mill, are an industrious family, and yet we venture to say they have never converted an old worn-out, thrown-away field into a fruitful garden, smiling with an abundant harvest. They are still poor, hard-working, and we have no doubt, honest people. But why do they continue to use that old shaft plough? Why are their horses still fed in a manger outside of the gate, a hobble put on them, and they required to graze, exposed to the weather, where nothing is to be procured? Why, in a word, is that old rock still kept in that industrious family? We suspect they have never read the Southern Planter, published at Richmond, Va., nor any other Agricultural periodical. They are ignorant of the principles of Agriculture. They have not the knowledge requisite for tilling the ground to advantage, and therefore their toil is misapplied, consequently they are still poor, notwithstanding all their industry. It is not long since, we heard a man say of another, "what a difference betwixt that man and his father. I knew his father well, he was a very industrious mechanic, he worked hard, early and late, he understood his business well, that is, the mechanical part of it; he was also a sober man, and that man lived and died a poor man. But there is his son, following the same trade. He never seems to be in a hurry. You seldom see him work with his own hands, he always appears to be at his ease; and yet that young man has managed to acquire a large fortune in a few years." We asked what caused the difference. The answer was, "the one had industry without management, the other combines management with industry." We are proud to say that young mechanic is now one of the wealthiest, and most respectable men of the place. Let us apply this to tilling the soil, either as Planters or Farmers, and we will soon find the true reason why so many industrious, hard-working men, labor so hard on poor land to so little purpose,

It is an old, but very true saying, "knowledge is power," no matter to what branch of science or profession or business it is applied: and we hold that the power of knowledge is as important to the profession of Planting, as it is to Medicine, Law, or anything else. Would that the cultivators of the soil would lay this to heart, more than they do. But whence is the requisite knowledge to be derived? This, we confess, is a very important question, and our only answer is, from experience. Experience is said to be a good teacher in all things, and we would suppose it especially so in Agriculture. But the objection here is, "most of us have no time, no means to make experiments." Experience is generally a very dear and slow teacher. Then we would say, let us avail ourselves of the experiments of others, those of our own country and age, as well as of other countries and past ages. But to do this, we must read Agricultural papers. Very well: but this will cost us something! So it will—a few dollars a year; but if by that means you raise a better horse, cow, sheep or hog, at less expense, you will not lose by the operation. But then we have no time to read newspapers! To this we would say, it is more agreeable to devote an hour or two in the week to the perusal of an interesting newspaper than to do that much extra work in the field; and if the knowledge gained by one hour devoted to the paper, will save two hours of hard work in the hot sun or pinching cold, you will certainly be the gainer by it. We would therefore say, by all means take an Aricultural periodical.

But, as we have been led on by this subject, far beyond our original design, we will here close for the present.

S. C. Temperance Advocate.

TOMATO KETCHUP.—Bake your tomatoes ripe and peeled, in a brown earthen pan, in a cool oven; then press out the juice and pulp through a sieve. Next to each quart of juice and pulp add ½ lb. of salt, 2 oz. of shallots (or onions) 1 oz. of ground black pepper, ¼ of an oz. mace; the same weight of allspice, ginger and nutmeg. Pound the spices together and boil them with the tomato pulp half an hour; then pass the mixture through a sieve, and when cold bottle it. This will keep good for years.

TOMATO PICKLES.—Take tomatoes when two thirds ripe—prick them full of holes with a fork; then make a strong brine, boil and skim it.—When cool, put your tomatoes in: let them remain eight days, and then take out and put them in weak vinegar. Let them lay 24 hours; then take them out and lay a laying of tomatoes, then a thin laying of onions, with a teaspoonful each of cinnamon, cloves and pepper, and a tablespoonful of mustard; then pour on sharp vinegar. You may put them in jars, if you like.—*Michigan Far.*

How many hundreds of human beings in this world, have died in poverty and wretchedness, from the fact of their being taught that *labor* was *degrading?* Oh! what a shame, and still we see this idea taught in the 19th century.—*Ten. Agr.*

COMMUNICATIONS.

SEED.

Conalagga, Macon Co., Ala., August, 1843.

Seed is the deciduous part of a plant comprising the rudiments of a new plant. It is the new plant in its embryo state containing the germ of the future plant, and the parenchyma which nourishes the young plant until its roots seek nourishment in the soil. The ultimate object of the growth of plants is the perfection of seed; consequently, every thing which hinders or injures the perfect growth of the plant, must derogate from the perfection of the seed. This is as plain as that cause produces effect. As the seed is the rudiments of the new plant, of course the plant partakes of every imperfect quality of the seed, with which will be combined in the new seed further imperfections, the result of injuries sustained in its present growth. These combining in the lineal descent effect from every extraneous cause, every one have a tendency to lessen the perfect growth of the plant, and to hasten its degeneracy, which seems to be a natural consequence. Some seed mature well on any soil; others are more choice, and require their peculiar soil, to which they are adapted. Cold wet land is injurious to the perfection of any seed, before the soil becomes incorporated and its rankness neutralised, the seed does not mature well. This and many other varieties of soil produce results different in germinating seed; but to discourse these particulars, would protract this article to too great length—suffice it to say, that light mellow soil, to which the sun has access, produces the best seed cotton—it is well known to mature best on a sandy loam—corn and small grain on a clayey loam. Climate seems to be the parent of the genus of plants producing its peculiar kind, which may be reproduced in the same climate without diminution, but when produced in foreign climes, it must suffer either a change of kind degeneracy, or destruction. The incidents attending the growth of plants, which are injurious, and which detract from the purity of seed, are very much rain at a certain time, giving to the stalks too luxurious a growth, scatters and prevents the assimulation of the fecundating matter—noxious weeds and grass crowding near, drawing the nourishment from the soil, preventing the gradual and uniform extension of the roots—wounds of the stems or branches prevent the regular flow of the juices—cutting the roots when the plants commence to bear seed, curtails the resources of the plants and diminishes the supply of matter so essential in the ultimate purpose, the perfection of seed. To raise seed to perfection, or as near as may be allowed, we should have peculiar regard to the selection, choosing the heaviest and most perfect, plant them at a proper time, upon soil judiciously selected, nourish it well, give every help to its growth, top off its superfluous branches, remove every thing which would operate against its growth or healthiness, gather the seed when perfectly matured, which may be ascertained by the dryness of the stem, and put them away perfectly dry. I am aware that perfection is hardly attainable in any thing, for accidents will occur, though we strive assiduously against them. Yet, if we endeavor to carry out these principles, by applying judiciously all the means within our power, though accidents may occur tending to blast our efforts, their effect will be lost in the succession by its strong tendency to perfection, and an improvement will be attained upon the common stock, and a reward for our toils.

William Todd.

CULTURE OF COTTON.

Messrs. Gaylord & Tucker—I perceive from your last number that Dr. Cloud's plan of cultivating Cotton, or at least his statement of its results, is received generally with small favor and less faith. While those of "little faith" and perhaps of smaller works, are condemning his plan and discrediting his statement, it is but fair that those who have adopted similar modes of cultivation, with similar results, should give him and the public the benefit of their testimony.

In the months of January and February, in the year 1841, I had a lot of five acres opened at intervals of 3½ feet, with furrows down to, and sometimes into the clay. In these furrows I deposited stable manure at a rate not less than 400 bushels per acre. and running immediately upon each side of these furrows with a turn plow, I buried the manure. Thus my beds for cotton were partly made: the superincumbent soil prevented, at least in part, the escape of the volatile portion of my manure, which being put deep, and the soil gradually accumulating over it in the process of cultivation, it was kept at all times properly moist, without which it does but little good.

Cotton being a tap-rooted plant, I doubt not that it would be an improvement upon the above plan, to open with a coulter plow, the clay or subsoil in or rather under these furrows, before depositing the manure; to the end that the soluble portion of the manure might subside gradually to a still greater depth. The lot which I manured upon the above plan, was originally a thin soiled chestnut ridge; had been cleared between forty and fifty years, and was of course completely exhausted. Indeed 200 lbs. of seed cotton per acre, would have been considered a good crop for such land, upon the usual plan of cultivation without manure.—About the last of March, I put two additional furrows with a turn plow, which completed my beds. These beds I opened with a coulter, sowed the seed in the usual manner, and covered with a board. This lot, thus manured and planted, received no extra care in the after culture, was treated in every respect like the balance of my crop. The result was 4,430 lbs. of seed cotton from the lot, or 886 lbs. per acre. But as I sowed this lot in wheat in the fall of that year, and before the cotton had been all neatly gathered, I may fairly set down the yield of the lot at 4,500 lbs. or 900 lbs. per acre. Here was an increase of between four and five fold the first year, and as I have planted upon land similarly treated, and gathered a second crop equal to the first, I consider myself as yet in the midst of an experiment, the final result of which can alone determine the full amount of benefit to be derived from a single application of manure. It will be at once observed that my plan differs in several points from Dr. Cloud's. I drill at 3½ feet, and chop out in the usual way, leaving the stalks as nearly as possible from 18 inches to two feet apart: while he checks at three by five feet. Thus he gives to each plant an area of 15 square feet, while I do not give an average of 7. He spreads and plows in 300 bushels of manure per acre, broadcast, while I apply none in that way. His was a deep sandy soil, with clay at a depth of 2 or 3 feet; mine a very shallow, stiff, red soil, with a very firm red clay, lying at various depths, from 0 to 6 inches below the surface, with an abundance of white flint or quartz rock upon it. The 300 bushels of manure which he applied broadcast, was doubtless of great advantage to his crop, and would in all probability have doubled mine. In other respects, I think his plan the best for his land; and mine, with a little more space to each plant, the best for mine.

The incredulous will of course consider this experiment of mine as lending no countenance to Dr. Cloud's statement: but when every circumstance is fairly considered, I think it does. My experience, however, does not stop here. I cultivated the same year another small lot about 85 yards long and as many wide, or 7225 square yards, which is 1 477-968 acres, or rather less than an acre and a half. This lot, in its primitive state, was of precisely similar quality with the 5 acre lot. About one-third of an acre of this, certainly not more, had been for several years a stable lot; the balance of it, descending from this by a considerable declivity, I cultivated, believing it may have been benefitted by washings from the stable lot portion. The surface soil had been nearly all washed away for years. The manure upon the stable lot portion had been carefully scraped up and removed, so that the manure left was such only as had been absorbed by the soil. To the other portion no manure was applied. This lot was broken up deep and planted about the last of March, and the rows running horizontally around the declivity, were from 3 to 4 feet wide, accordingly as the land was considered poor or otherwise. From this lot I gathered 1,707 lbs. cotton in the seed. Of that I set down 1,400 lbs. to the stable lot portion, leaving to the balance 307 lbs, which I am sure is a liberal allowance. But little of the weed on this lot, except on the stable lot portion, attained a height of 18 inches—much of it not even 6 inches. The stable lot portion had attained an average height of 6 feet by the last of July, and was so much interlocked that it was impossible to pass through it without doing great injury to the branches. By the middle of August, the weed on this portion ceased growing and the whole vegetative energy of the plant seemed directed to the development and maturity of bolls, of which there were vast numbers. This cotton suffered much from two causes. It was too much crowded, which caused a very great number of the earlier or bottom bolls to rot for want of sun and air. Towards the latter part of August, a wet spell of weather of several weeks duration set in, which producing a second growth of the weed, caused vast numbers of furns, blooms, and young bolls to fall off, which a moderate season would have matured Under all these disadvantages, there was still a yield at the rate of 4,200 lbs. per acre.

I have only room to add that I highly approve of Dr. Cloud's plan, and that my own experience and observation forbid that I should discredit the general correctness of his statement. I have long been of opinion that it would be of great service to the cotton region of South Carolina and Georgia partiularly, to divert at least one-third of all the labor employed in raising manure. The result would be equal crops of cotton at least, upon a greatly reduced number of acres; the improvement and renovation of our worn lands; larger crops of corn and grain; more hogs, cattle, sheep, horses and mules raised at home—our country, in short, adorned, beautified and enriched.

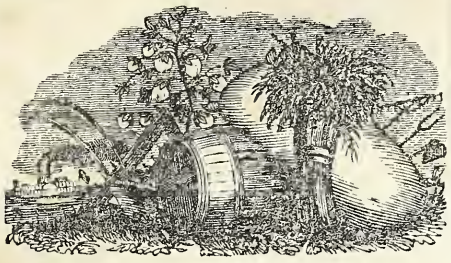
Very respectfully, yours,

S. Fouche.

Taliaferro Co., Ga., June 23, 1843.

Southern Cultivator.

Blackberry Syrup.—The following directions for preparing this article, pleasant for the taste, and the best remedy for the summer complaint among children, we find in the Maine Cultivator. To two quarts of the juice of blackberries, add one lb. of loaf sugar, half an ounce of nutmeg, half an ounce of cinnamon pulverized. To this add half an ounce of cloves, and quarter of an ounce of allspice, pulverized. Boil all together for a short time, and when cold, add a pint of proof brandy. Bottle carefully, and keep in a cool place for use.



WEDNESDAY, SEPTEMBER 13, 1843.

BACK NUMBERS.—All new subscribers to the "Southern Cultivator" can be supplied with the back numbers.

THE CROPS.

The prospect of the corn crop is indeed most flattering, from every section of the Union from which we have any intelligence, and leads to the conclusion, that the crop will be very abundant. Of our own great staple, however, the prospect is not so cheering to the heart of the husbandman. Although it may be justly regarded too early to speculate with any degree of certainty as to the growing crop of cotton, yet all concur in the the opinion, that the late spring, and the continued rains of July and August, which were general throughout the cotton growing region, have operated so prejudicially, that the most favorable fall ever known could not produce as large a crop as that of last year. Nor is this in our opinion desirable, yet we should be pleased to see a fair average crop, which we think will be produced, if the frost keeps off till the 15th of October—provided the weather continues favorable for the maturing of the staple till that period.

WILKES COUNTY AGRICULTURAL SOCIETY.

In the Washington News we find the following notice of the proceedings of this Society, at a meeting held on the 7th inst. We also learn from the News, that the amount of the premiums to be awarded by the Society, will be regulated by the state of the treasury at the time.

Resolved, That premiums be awarded for the following stock, to be exhibited on Friday, the 20th of October next, in Washington:

For the best Horse.
" Colt, under one year old.
" Cow.
" Native Cow, which if she be the best cow exhibited, may take both premiums.
" Bull.
" Boar.
" Sow.

It was further *Resolved*, That none shall compete for the premiums who have not become members by paying the admission fee of one dollar, and signing the constitution; though all persons are invited to attend and exhibit their stock.

The semi-annual meeting of the Society will take place on Friday, the 20th of October, at which time a public address will be delivered by a member of the Society.

It has been our purpose, and our constant effort, since our attempt to establish an agricultural paper at the South worthy of the patronage of Southern planters, to render it the fit and proper medium of communication for whatever pertains to the progress of agriculture around us. We have therefore felt some surprise that the officers of the few Agricultural Societies in Georgia, should seem studiously to avoid giving to us, directly, any information connected with their respective societies, their progress, &c. &c. In the absence of which, we have been compelled to glean whatever of their proceedings we have from time to time published, from our exchange papers—papers not devoted as ours, exclusively to the cause of Agriculture. We mention this fact in no spirit of complaint, but simply to notify the officers of the respective societies, that we deem our paper the appropriate medium for communicating their proceedings to their brother planters, and shall always take pleasure in giving them a place, together with any interesting or valuable facts they may feel disposed to communicate. It is true, every Society has an undoubted right to give its proceedings publicity through whatever medium it may choose, or deem most fit and proper—a right which we shall not controvert, or of the exercise of which complain. Yet at the same time, we feel that something is due to us from those in whose behalf we are devoting our energies, and while we express a willingness to give place to such items of intelligence, the withholding of them by the officers certainly savors of a disposition not to second us in our efforts. We therefore hope that the Agricultural Societies throughout the State, as well as those in South Carolina and Alabama, who may feel disposed, will in future avail themselves of our columns as the proper medium through which to give their proceedings publicity.

GAPES IN CHICKENS.

The following is an extract of a letter received from a friend in Caroline:

"It writing to you, it will probably not be amiss to communicate a fact which will be of some interest to *the lovers of fried chickens.*—Some of my neighbors have entirely prevented, and others have speedily cured that destructive malady, the gapes in their chickens, by mixing a small quantity of spirits of turpentine in their food. From five to ten drops, added to a pint of meal to be made into dough, are the proportions used. I have no doubt of the universal and certain success of the remedy, relying, as I do, upon the character of those who have communicated it to me. Yours,

BENJAMIN ANDERSON.
Southern Planter.

NEATNESS.—"A place for everything, and everything in its place." This should be the motto of the farmer. Neatness, of all virtues, is the most commendable, for without it no other virtue can long exist. Supposing a farmer has a slatternly wife—can he, think you, be as good a husband as though his helpmate was neat and tidy? Assuredly not. There will be so many crosses—so much of provocation and annoyance, and so little of uniformity and system in her domestic arrangement, that he will sometimes find fault, and vent the fullness of a just indignation in censure "loud and deep." This is always unpleasant—always disagreeable, what every one whose "combativeness" is not the ruling passion, the predominating characteristic of his mind, will by all means labor to avoid. On the other hand, a slack, indolent husband—given to much smoking, horse-racing or tavern-haunting, will destroy the felicity, and break down the energies of the best wife in the land. There is nothing, perhaps, of which woman-kind are more invincibly tenacious, than of their domestic emolument; those little rights and privileges which pertain exclusively to the "realm within;" and whenever these are wantonly invaded—no matter whether by an act of sheer indolence on the part of the offender, or by brutal aggressions arising from a vain and capricious spirit of causeless interference, the harmony of the "marriage state" vibrates into discord, and the whole machine is at once thrown out of gear. A quid of tobacco in the batter pan, or a pipe full of ashes in the stew-dish, is enough to destroy the equanimity of any woman; while dishes never washed, beds never made, and floors never clean—with all the other innumerable and unmentionable negligencies which add to the repulsive catalogue of a slut's offences, are sufficient to upset the equanimity of a stoic, and unhinge the patience of Job himself. To a person thus circumstanced,

"There is 'na luck about the house."

No matter how prosperously the world may go without, all within will be strife and discord, and the "latter end of such, ten to one, will be more wretched than the first."—*Maine Cul.*

WORK FOR SEPTEMBER.

As much of the success of next year's labors will depend upon the manner in which the work of *this month* may be executed, we feel that we cannot too urgently impress upon our agricultural brethren the necessity of paying particular attention to every duty now devolving upon them, and to see that whatever may be done, shall be performed in the best possible manner, and that no *delay* which can be avoided be permitted to take place as to the *time* of its performance. With this brief introduction, we shall proceed to point out what ought now to be attended to

ON THE FARM.

Fall Ploughing for Grain.—Many of you have doubtless commenced this work. To such we say, push on with your labors until you shall have completed them. To those who have not begun, our advice is, to begin without another day's delay; and on both we would urge the propriety of observing care as to the manner of ploughing. Let your furrows be ploughed deep, and the slices so laid as to bury all vegetable matter and pulverize the soil; for, believe us, these are objects of the very first importance.

Seeding Rye.—In putting in this crop *see* that you commit your seed to soil calculated to remunerate you for your labor, as it is fruitless to be expending your force and time on land too poor to yield a compensating return. Where the ground may be *really* poor, by the application of a bushel of plaster and two bushels of salt, or four of ashes per acre, you may place the soil in a position to make moderate amends for its lack of fertility, as these substances will absorb nutriment from the atmosphere, assimilate with it, and dispense it to the crop, as well as maintain a healthful moisture throughout the season. Be sure, too, to get your Rye in early, and to sow at least five pecks to the acre. It is scarcely necessary for us to remind you, that no land should be seeded before it is finely pulverized by repeated harrowings, and that after the seed is in, it should be again harrowed and finished by rolling.

Seeding Wheat.—We last month endeavored to impress upon you the propriety of *early* seeding, and we will here repeat, that we believe much danger may be avoided by getting in this grain much earlier than you have been in the habit of sowing it. We will sum up our advice in a few brief rules: *Sow early—sow plenty of seed, not less than two bushels to the acre—soak your seed in salt brine or ley, for* 12 *or* 24 *hours before sowing, and as you take it out to sow, dry it in lime or ashes—if your land has not been limed or marled, sow thereon five bushels of lime per acre, after the seed is in—if your land is not rich, sow over each acre a bushel of plaster and two of salt.* Indeed, whether rich or not, we think you will find your interest promoted by sowing the plaster and salt over it, as we believe it would have the tendency of not only fixing the ammonia in the soil, but of retaining it in store, to be fed

out *gradually* to the growing plants, and of pr? venting to a certain extent, the rust.

Sowing of Grass Seeds.—All meadows intended to be set in grass seed, should be prepared and sown as soon in this month as possible. The soil should be made fine and plenty of seed be sown. The following proportions will anwer:

If Timothy alone, from 1 to 1½ peck per acre, the latter quantity the most eligible one.

If Orchard grass alone, 2 bushels per acre.

If Red Top alone, 1 bushel per acre.

If a mixture of any two of these be desirable, one half the quantity of each should be sown.

The following mixture would make a good one: 1 bushel of Rye grass and one of Orchard grass, to be sown early in this month, and to have 12 lbs. of clover seed per acre sown thereon next spring as soon as the seed can be lightly harrowed in and rolled without injury to the ground.

Recollect that a *light harrow* is better than a bush harrow, as the latter always drags the seed into irregular masses.

Draining and Ditching.—This month is advantageously suited to such work, and if you have any arable ground that is *wet*, be sure to have it drained, as no plants can thrive as they ought to do in a wet bed.

Weeds, Leaves and Mould.—Can we prevail upon you to go to work with one of your teams and a hand or two, and collect some hundreds of loads of these substances and cover over the yard in which you intend to keep your stock. By doing so now, they will become consolidated by the time you yard your cattle; and rely upon it, that they will make every pound of it good manure by next spring; but if you desire that there shall be no loss from evaporation of the *gem-like liquid*, spread a bushel of plaster or charcoal over the mass, once in two weeks, from the time you yard your stock until you cart out your manure in the spring. Be sure, too, in forming your yard, to make it in the shape of a basin, so that none of the rich fertilizing juices may be washed away.

Hogs and Hog Pens.—If you have the means of pen-feeding, pen some of your hogs, and provide them with materials to convert into manure for you.

Salting Stock.—Take equal parts of salt and lime, mix them together, and give to every animal on your place, twice a week, one gill of the mixture.—*American Farmer.*

MIXTURE OF SOILS—SAVING OF URINE.

The improvement of our lands, by the mixture of soils, is a means almost entirely neglected in our country. There have been, to be sure, a few honorable and striking exceptions; but these are so few as to be scarcely worthy of notice; for their example appears to have been unproductive of a tithe of the influence to which they were intrinsically entitled. In England, however, instances are as numerous as they have proved beneficial, where the most striking and lasting improvements have been brought about by simply mixing clay with sand, and sand with clay. By this process, not only the *textures* of the soils of extensive landed estates have been changed, but a capacity for retaining the benefits of manure imparted to loose sands, on the one hand, while on the other, stiff unwieldy clays have been so broken down in their adhesiveness, as to be rendered friable. Nor is this mechanical change, so beneficial to either grade of soils, the only resulting good. As in all virgin clays there are a greater or less proportion of potash, and more or less portions of lime and the other mineral salts; so that by adding and mingling such clays with loose sands, we not only convert them into moulds, but supply also, many of those salts which are absolutely essential to healthy and productive vegetation.

The above reflections, as to the advantage of using clay as an auxiliary manure for light sandy land bring us to the consideration of the question, as to the best and cheapest method of applying them. In a country like ours, where labor is dear, and time may very properly be said to be money, there are but few of us who could probably undertake to give at one dressing the requisite quantity of clay, to convert, by admixture, the sandy into a loamy soil; but the end can be attained in a way so that neither the labor nor the expense will be materially felt as a tax. Let a hundred or two loads of clay be, at the beginning of every autumn, spread over the barn or cow yard, and thereon be placed a covering of leaves and mould from the woods. Such a body of materials would comprise an admirable bed for the cattle to winter upon—would form an absorbing substance to drink up and retain the liquid voidings of the cattle thro' the fall, winter and early spring, which when mixed, at the time of carrying out the manure, with the litter and solid excrements which had in the the interval accumulated thereon, would prove a body of manure rich in all the elements of fertilization, as well as form a basis for *amending* the soil of singular value. By repeating this course of applying the clay, a vast amount of liquid manure would be saved that is now lost, and the texture of the soil would be changed in a few years, without the time or expense being seriously felt. But to render the value of the *liquid* manure the more available, or in other words, to prevent the loss of its more valuable and volatile parts, it would be well to spread a few bushels of plaster and or charcoal over the clay, say 1 bushel to every 20 loads, so proportioning its distribution, as to have about one fifth part spread every three or four weeks. By this means there would always be a fresh body of plas er or charcoal present, to assimilate with and prevent the escape of the ammonia of the urine of the cattle, and thus preserve it for the purposes of fertilization.

Without entering into any minute calculations upon the subject, it may be assumed as the result of chemical analyses and experiments, that every animal of the cow kind kept in a barn yard, when well fed voids urine enough each day, if the escape of the ammonia were prevented, to manure ground enough to produce from two and a half to three pounds of wheat—this is less than the quantity claimed—and that three-fourths of that gas can be saved by the judicious use of plaster or charcoal, in the process we recommend, we do not hesitate to state as our honest belief. If such be the state of the facts in the case, every farmer can make his calculations as to the loss he annually sustains, by letting the urine of his cattle go to waste, and if he be prudent, he will not hesitate as to what is the proper policy for him to pursue.

We have referred to this subject at this particular time in order that farmers may be reminded of it in time to make the necessary arrangements against fall, to avail themselves of the advantages to result from such a husbanding of one of the very best manures that they can use. In speaking of the several substances, we have endeavored to be plain, in order that, in striving to be useful, we might not run the risk of bewildering.—*American Farmer.*

Industry and frugality, is the surest road to ¡ndependence.

CONTENTS OF THIS NUMBER.

	PAGE.
The Preparation and Use of Manure	145
Save your Soap Suds; Crushing Corn; Use of Salt; Clover; Milking; Flax Seed Oil; Maxims	147
The Management of Fruit Trees; Tomato Sauce	148
Manuring Cotton Land; The Improvement of the Soil, &c.; Tomato Ketchup; Tomato Pickles	149
Seed; Culture of Cotton; Blackberry Syrup	150
The Crops; Wilkes County Agricultural Society; Gapes in Chickens; Neatness; Work for September	151
Mixture of Soils—Saving of Urine; Advertisements	152

GARDEN AND FIELD SEED.

A GENERAL assortment of fresh and genuine GARDEN and FIELD SEED, among which are the following:

Red and White Clover,
Blue and Green Grass,
Rye and Orchard do.,
Timothy and Herds do.,
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Seed Corn of every valuable variety,
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WM. HAINES, Jr.,
No. 232 Broad street, Augusta, Ga.
August 30. 18–tf

TURNEP SEED.

A SUPPLY of the following varieties of fresh TURNEP SEED just received, viz:

Yellow Sweedish or Ruta Baga, very fine for stock,
Large Globe Turnep, } Fine
" White Flat do. } for
" Hanover or White Ruta Baga do } table
" Norfolk do. } use.

For sale in quantities to suit purchasers, by
Aug. 30 18–tf WM. HAINES, Jr.

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THE undersigned is the Agent of Messrs. Abbett & Co., for vending rights to individuals for making and using the above named Manure. By reference to the following advertisement of Messrs. Abbett & Co., the prices may be ascertained. All orders addressed to me, *post paid*, at Sparta, Ga., will receive prompt attention.
Aug. 30. 18–tf R. S. HARDWICK.

THE BOMMER MANURE METHOD,

WHICH teaches how to make vegetable manure without the aid of live stock, in from 15 to 30 days, by a course of humid fermentation set into action at a cost of from 50 cts to $4.

And also to make Compost *in a few days.* And how to make a rich fertilizing liquid called "purin," having all the strength without the acrid qualities of urine.

With the view of graduating the cost to the quantity of land upon which it may be desired to use the method, the following scale of prices has been adopted, viz:

For Gardens of any extent $6
Farms up to 100 acres 10
" from 100 to 200 acres 15
" " 200 to 300 " 18
" " 300 to 400 " 20
" over 400 acres in any one farm 25

By the remittance of the sum here specified, a copy of the method will be sent by mail or in any other mode proposed by the purchaser.

All letters of inquiry must be post paid.
ABBETT & CO., Baltimore,
Proprietors of the patent right for the Southern and Western States. aug 16

THE SOUTHERN CULTIVATOR

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SOUTHERN CULTIVATOR.

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Having published the article from the Albany "Cultivator" to which the following is a reply, it is perhaps but justice to our readers that we should give them the reply, in order that they may avail themselves of all the lights that may be brought to bear upon a subject of such high import to the planter.

—

From the American Agriculturist.

IMPROVEMENT OF DOMESTIC STOCK.

Under this head, we find in the Albany Cultivator for last month, a long and elaborate article, parts of which recommend a course of breeding so directly opposite to all true principles of which we have ever read, or heard, or seen practised, by anything like what we should consider authority in this matter, that we cannot pass it over in silence; for, if acted upon, it would totally destroy, in a single generation, every choice breed of animals that we now possess, and which it has cost this and other countries, so much time, labor, and money, to bring to their present state of perfection. The Cultivator says, page 107, July No.:—

"But it may be doubted by some, whether any improvement on the best of the present high-bred cattle, is possible, and the idea of it be scouted as an absurdity. 'What,' it may be said, 'talk of improving a breed by crossing them with those still lower in the scale?' *We answer yes, and hope to shew there is nothing chimerical in the plan.* For illustration, we will again recur to the Short-Horns, as unquestionably at the head of the improved breeds. Breeders have enumerated a great number of points as going to make a perfect animal; to make one absolutely perfect, we will suppose that 30 enumerated qualifications are requisite; that the Short-Horns, as approaching the nearest to this standard, possess 20 of the desired qualities; and the other varieties or breeds in a descending ratio down to our native stock, which may be put as possessing but 5 of these requisites. The question is, can an animal possessing 20 good points be improved by one possessing only 10 or 5? We answer yes, if the one possessing 20 is deficient in any of the points possessed by the lowest, or by 5. 20 may be deficient in hardihood or the power of enduring our seasons; in milking properties; adaptation to labor; quality of flesh; or some other point or points possessed in a remarkable degree by 5; and this deficiency remedied by a skilful cross with 5, which shall engraft and fix the valuable point on 20, would make it 21, or furnish a decided advance towards animal perfection."

Now the idea of improving an animal that has twenty good points, with one that has only five, we cannot characterise by milder terms than saying, is as gross and perfect a piece of absurdity as we ever heard. The Cultivator seems to suppose, that man has the same plastic power over the animal creation, that the sculptor has over his clay model, and that wherever there is a deficiency in his subject, he has only to supply it with additional mortar, which he takes up from his heap at pleasure, or where there is an excess, to simply pare it away! Now the only true principle of improvement in breeding which we ever heard of, is this: If an animal be deficient in any one point or more, it must be crossed by another animal *equal* to it in all its *good* points, and *superior* to it in its *deficient* ones; and then the chance barely is, that one half the produce may be *equal* to the *superior* animal thus used in the cross, and the other half not *inferior* to the *poorest*. But if an animal of twenty good points be crossed with one of only five, no experienced person would expect that the produce would possess over ten or twelve good points at most; and it would be a sort of miracle, if a single one of the produce had twenty-one good points infused into it. When animals are crossed, it is a law of nature that the blood mingles—it does not go in lumps. We must consequently take the bad with the good, and the extra hazard of deterioration, to which all breeds are constantly subject. We know that now and then, though very rarely, for example, breeding a superior Short-Horn bull to a native cow, and that produce, if a female, to the same bull again, that the third generation, the three-quarter bred animal, will sometimes be a very good one—to all appearance, nearly as good as the thorough-bred bull; but the produce of that three-fourths bred *cannot be depended upon* for equal and exact breeding. We have seen cows that had only one two hundred and fifty-sixth part of native blood in them, (and very fine animals they were too, individually,) bred to a choice bull, throw a calf occasionally very inferior, more resembling the dung-hill than the thorough-bred.

We suppose, upon this principle, that to improve the Spanish fine-woolled sheep in hardiness, (though we contend that the old-fashioned Merinos were as hardy as anything that stands on four legs,) the Cultivator would take a cross upon the old native, or other coarse-woolled breeds, thinking it could do so at will, without deteriorating the fine wool of the Spaniard. If so, let it look to Lord Western's experiments on this matter to be convinced of the ill-success of such undertakings. Again, to give size and strength to the racer, it would take a cross with the cart-horse, the most contemptible mongrels upon which we ever looked. We should be very glad to know *where* such animals would be *placed* after a thorough training, and a fast turn of a few miles on the course. We do not mean any unfairness in our argument by taking the cross of two different kinds for an illustration, but to place the subject in a stronger point of view, the ass is longer-lived than the horse; now suppose we wish to increase the age of the latter, why then we should breed them together, expecting that we should get, to a moral certainty, this *one* good point in addition in the produce, without any deteriorating quality of the ass. But does the mule show this perfection? And if it could be bred to the horse again, and its produce on till finally a thousandth part of the blood of the ass only appeared in the progeny, would not the shadow of its long ears still be seen, and the falsetto of its unearthly bray occasionally be heard? How is it with the cross of the Caucassian and Negro races? Divine authority has asked, "Can the Ethiopian change his skin, or the leopard his spots?"

Yet enough, for it would seem that the Cultivator is not a convert even to its own bold assertions, for further on it says: "But there must be no breeding *downward;* every cross must be *upward* both in blood and desired qualities."

There are some other positions that the Cultivator takes in this article, which are denied. For example: "It is rare indeed, perhaps never, that any single point is found in the highest degree of excellence, except at the *expense of some other point.*" We doubt, from the sentences which immediately follow this just quoted, whether the Cultivator understands what it is talking about.

We have not usually found, in our experience, "the deepest and best milkers of the herd the most raw-boned, not to say the worst-looking of the whole," but quite the contrary in well-bred Short-Horns. Did the Earl of Leicester improve the good milking qualities of the Devons at the expense of their fineness of points? Were the Ayrshires so improved? And are they attempting the same with the Herefords?

It is denied that Charles and Robert Colling were the originators of the Short-Horns; on the contrary, any reasonable amount of evidence can be produced in England, to prove that Chas. Colling repeatedly said, he never bred anything equal to the Short-Horn cow, which he purchased of the agent of the Duke of Northumberland. Where is the Cultivator's authority for its assertion? We suppose we shall be told of Countess that sold for 400 guineas—the Galloway cross, and all that sort of thing. Well, we shall be glad to have our memories refreshed with the story, and when it is repeated in full, we shall see how much it will avail the Cultivator.

Did "Berry and Coates co-operate most effectually in forwarding the improvement commenced by them," [the Collings]? This assertion is really too rich, and we would fain ask for the authority on which it is made. The Cultivator adds, that the reputation of being good milkers, "does not belong to the improved breed." Short-Horns, we suppose, it means. If it does not, we should be very glad to know then to what breed of cows it does belong. But this, we opine, would depend very much how they had been "improved." If by a cross with a scrub of five points, on a Short-Horn of twenty points, why then we have nothing more to say. We *knock under* to all such "*improvements.*"

The public will hereafter look to the Cultivator for a new era in cattle-breeding, and they may hope, some half century hence, by its new code of rules of "improvement," to get a decent milker or two! If the Short-Horn breeders put up with such gross calumnies upon their stock, why then we are greatly mistaken in their spirit, and the sooner their herds are driven back to the place from which they came, the better. We did really believe that some *few examples* had been given on this point, and that they had invariably offered to meet the breeders of native, or any other stock, to milk with them—cow for cow, or herd for herd, however small or large the numbers might be. But since the Cultivator asserts the contrary, why we suppose we must fain believe it. But here we have another question to ask. Is the Cultivator sure that the cows mentioned in its May No., by Mr. Heslip, as giving so great a product of butter and cheese, are *pure* natives? We know that Shorn-Horn bulls have been taken into Trumbull county, Ohio, and it is our firm belief that many of the animals there are grade Durhams in some way. We shall take the trouble, if possible, to get at the facts in this case. But native or not, we think that the breeders of thorough-bred Short-Horns will have no fear of matching their ani-

mals against them in the production of butter and cheese, grass and hay-fed, or kept in any other manner it pleases. For twenty-five cows to produce 13,715 lbs. of cheese, and 309 lbs. of butter, 548 lbs. each of the former, and 12 lbs. of the latter, we do not think so very extraordinary. We have heard of a cow making 21 lbs. of butter per week, and it was thought, with how much reason we do not know, that she might make 500 lbs. in the course of a year. What amount of cheese this would be equivalent to, we could not say, as this would depend a good deal upon the amount of caseine in the milk.

There are some other assertions in this article of the Cultivator, also a few paragraphs which have appeared from time to time in its pages, upon which we would like to offer a few comments, but our space forbids. We shall probably recur to them hereafter, as it seems to have an especial fondness for communication of this nature.

GREEN MANURING—OR THE APPLICATION OF VEGETABLE MATTER IN THE GREEN STATE.

JOHNSTON, in his lectures on the applications of Chemistry and Geology, has a very long and able article on the above subject, but as it is too long for insertion entire, we shall endeavor to give the practical results to which the writer arrives, from which the reader will be able to draw such conclusions as cannot fail to be profitable to him, provided he acts up to the advice which those results would impress upon his mind. These results are:

1. That the ploughing in of green vegetables on the spot where they have grown, may be followed as a method of manuring and enriching all land, where other manures are less abundant. Growing plants bring up from beneath, as far as their roots extend, those substances which are useful to vegetation—and retain them in their leaves and stems. By ploughing in the whole plant, we restore to the surface what had previously sunk to a greater or less depth, and thus make it more fertile than before the green crop was sown.

2. This manuring is performed with the least loss by the use of vegetables in the green state. By allowing them to decay in the open air, there is a loss of both organic and inorganic matter—if they be converted into fermented (farmyard) manure, there is also a large loss; and the same is the case, if they are employed in feeding stock, with a view of their conversion into manure. *In no other form can the same crop convey to the soil an equal amount of enriching matter as in that of green leaves and stems.* Where the *first* object, therefore, in the farmer's practice, is, so to use his crops as to enrich his land—he will soonest effect it by ploughing them in in the green state.

3. Another important result is, that the beneficial action is almost immediate. Green vegetables decompose rapidly, and thus the first crop which follows a green manuring is benefited and increased by it. But partly for this reason, also, the green manuring—of grain cropped land—if aided by no other manure, must generally be repeated every second year.

4. It is said that grain crops, which succeed a green manuring, are never laid—and that the produce in grain is greater in proportion to the straw, than when manured with fermented dung.

5. But it is deserving of separate consideration, that green manuring is especially adapted for improving and enriching soils which are poor in vegetable matter. The principles which *living plants draw a part—sometimes a large part—of their sustenance from the air, must be admitted, and add to their value as fertilizers.* Living plants, then, contain in their substance not only all they have drawn up from the soil, but also a great part of what they have drawn from the air. Plough in these living plants, and you necessarily add to the soil more than was taken from it—in other words, you make it rich in *organic* matter. Repeat the process with a second crop, and it becomes richer still—and it would be difficult to define the limit beyond which the process could be no further carried. Is there any soil which is beyond the reach of this improving process. Those only are so on which plants refuse to grow at all, or on which they grow so languidly as to extract from the air no more than is restored to it again by the natural decay of the organic matter which the soils already contain.

But for those plants which grow naturally upon the soil, agricultural skill may substitute others, which will increase more rapidly and produce a larger quantity of green leaves and stems, for the purpose of being buried in the soil. Hence, the selection of particular crops for the purpose of giving manuring—those are obviously the fittest, which, in the given soil and climate, *grow most rapidly, or which produce the largest quantities of vegetable matter in the shortest time and at the smallest cost.*

The plants enumerated by Professor Johnston, as best adapted to the purposes of green manuring, are: 1. *Spurry;* 2. *Pulse;* 3. *The Vetch;* 4. *Buckwheat;* 5. *Rape;* 6. *Rye;* 7. *Turnips;* 8. *Borage;* 9. *Red Clover;* 10. *Old Grass Swards.*

We have for years endeavored to impress upon such of our readers as had not the means of obtaining a sufficient quantity of animal and vegetable manures from their stock to manure their fields, how important it was that they should plough in *green crops*, and we are the more pleased to find that our views, so often advanced, are so ably sustained by the opinions and experience of so distinguished a man as professor Johnston. We have heretofore recommended that Buckwheat should be sown for the purpose of being ploughed in whenever lands were poor and its owner had not manure at hand to improve it. We recommended buckwheat because of the quickness of its growth, and the largeness of its leaf enabling it to appropriate to itself a very considerable portion of those nutritive gases which abound in the air, and form large portions of the food of plants.

We defer to no man in our estimate of the great value—the paramount importance—of *lime* to every soil calculated to produce vegetables; but still we have always thought that all soils require, besides mineral substances, those of vegetable and animal matter also, to make them partake of the highest elements of fertilization. We would not be understood as supposing that one crop of buckwheat turned in would be equal to a full dressing of rich stable or barnyard manure—but we do maintain that two crops turned in just as the plant comes into flower, would be equal to a very heavy dressing of any putrescent manure which could be applied. And upon the score of *cheapness*, we know of none where the party has to buy, that can compare with it; and then, when properly and evenly sown, *green manure* has this advantage, from the equal distribution of the vegetable matter over the entire field, there is an equality of fertility in all its parts, a thing most desirable, as every practical farmer will readily admit.

In conclusion, let us most respectfully advise all who may have exhausted lands and who may not have the means of procuring a supply of other putrescent matters, to make arrangements to sow and plough in a crop or two of buckwheat. Should they use lime or ashes in connection with the green-*ley*, so much the better—the more prompt and decided will be its efficacy. *Man requires bread as well as meat, and the earth requires vegetable as well as mineral substances.*

American Farmer.

Any deviation from the most exact and scrupulous sincerity, is repugnant to the good faith that ought to prevail in contracts. Any dissimulation concerning the subject matter of the contract, and *what the opposite party has an interest in knowing*, is contrary to that good faith.—*Pothier.*

It is not sufficient that we avoid what is wrong—we should also practice what is right. The former is a negative virtue, the latter positive.

NEW METHOD OF MAKING MANURES.

The subject of increasing their store of manures, is wisely occupying much of the attention of the farmers, for they find them indispensable in an improved system of agriculture. The greater the quantity, therefore, that can be made and judiciously applied upon their lands, the more certain their success in obtaining good crops, and adding to the profits of their business. The following extract is taken from the Farmer's Mine of Wealth, or Manure and Tillage; a very valuable work by Mr. Hermance, just published by Saxton & Miles. It gives a somewhat novel method of making manure; and by strictly following it, the farmer will find that he can greatly increase his resources, and work up into fertilizing matter what has hitherto been considered mere rubbish, and greatly in his way. For full particulars, and the benefits of this process, we must refer to the work itself.—*American Agriculturalist.*

1. Form your barn-yard with a gradual descent to one side, so that the liquid formed by the rains will flow gently to that side. Make the bottom as hard and smooth as possible, that there may be little or no waste by soaking into the earth. Arrange your stables, hog-pen, &c., in such order, as to throw all the litter and manure into the yard.

2. Sink a vat or reservoir at the lower side of the yard, of sufficient capacity to contain the juice of the yard. The most common form of the vat is six feet width by three feet depth, and twelve feet or more in length, according to the size of the yard, and the amount of liquor flowing from it. When the vat is more than twelve feet in length, it will be best to divide it by partitions into two or three parts, so that if at any time you want to use only part of the liquor, you can do so without any inconvenience. It will be farther desirable to have the vat so connected with the yard, that when once full, and you have commenced your manufacture, if additional rains come before you shall have completed your heap, of which we shall soon speak, you can prevent the liquid so formed from running into your vat, either by keeping it back in the yard, or by turning it in another direction.

3. In this vat mix the following ingredients as nearly as you can, without actual measurement or weight:—To every barrel of liquid, add 4 lbs. of stone lime just slacked, 4 lbs. wood ashes of good quality and dry, or an equivalent of leached ashes, or a ¼ lb. of potash; ¼ lb. of salt, or its equivalent of old brine; 2 oz. of saltpetre; 20 lbs. plaster of Paris, or mud, or muck; 10 lbs. of excrements from the privy, or 20 lbs. of horse manure. Mix these ingredients thoroughly with the liquid in the vat, and if the vat contains one hundred barrels, increase the above ingredients a hundred fold. It will be well to mix these ingredients a few days before you lay your heap, and stir them every day, but this is not essential.

On the upper side of the vat lay the foundation for the heap, by placing poles or rails, with one end to the vat, and the other extending from it, about two feet apart; on these lay other poles crosswise, precisely as we do the foundation for a stack of hay or grain) to keep the straw from the ground, and that the liquid may flow freely beneath.

5. Having every thing prepared, commence laying up the heap by placing a layer of straw, weeds, stalks, or whatever you have at hand, on the foundation of poles, to the thickness of a foot. You will find great advantage from throwing the materials as you collect them, in the yard, and letting the cattle tread on them, until they are thoroughly broken and wet. When the layer is a foot thick, stir up the ingredients in the vat, and with a pail or other vessel thoroughly wet the layer on the poles. Place another layer on the first, and of the same thickness, wet as before, and thus continue until you have raised the heap as high as you wish—say from six to ten feet. Be careful at every wetting to stir up the ingredients from the bottom of the vat. The easiest and quickest way to wet the several

layers, will be to use a pump or elevater, with a hose attached, to spread the liquor over the heap. In such case, let one stir, another pump, and a third manage the hose. Only be careful whatever method you pursue, to wet the several layers thoroughly in all their parts. When finished, cover the heap with the settlings in the bottom of the vat, or with any thing else at hand—common earth will answer.

6. If the heap consists of straw, weeds, and the like, it will require wetting every fourth day. If you have used much peat, muck, or earth, with the straw, water once a week. To water the heap, make holes with an iron bar or other instrument in the top of it, from eight to twelve inches apart, and extending downward about to the middle; then stir the liquid in the vat, and pour it in the holes until the whole mass is saturated; finally, close the holes. At every watering make new holes.

Give the heap three waterings when made of straw, and it will be fit for use in 15 days from the time of laying it up; when much mud or muck has been added, thirty days.

When it is desired to manufacture this kind of manure in places where barn-yard liquid can not be readily obtained, river, spring, or pond water will answer the same purpose for wetting the heaps as the barn-yard liquid, by increasing in a small proportion the ingredients for the mixture, as given in section 3, and adding them to it.

Bommer's Manure.—The agent of Mr. Bommer was here a few days ago, and had a heap constructed in Mr. Russell's vegetable garden. The materials are now rotted, and Mr. Russell invites planters who may feel any curiosity on the subject, to call and examine for themselves.

We expressed the fear some weeks ago, that the process would create a stench so offensive as to produce sickness. Mr. R., however, assures us that this is not the case; that he superintended this, and assisted oftentimes, and that there was not a more strong or offensive odor than is experienced by being near an ordinary manure heap.—The offensive odor, he says, is prevented by the materials used with the water, lime ashes, &c.

Without being sanguine in our expectations that this system of making manure will prove to be of great benefit in the South, we think, nevertheless, that it has sufficient testimony in its favor to render it worthy of investigation on the part of planters. As the *right* for a hundred acres costs but ten dollars, it would be well for a few neighbors in different places to unite in purchasing the said right and thus try the experiment, at a trifling expense to each. And if, after a fair trial, it proves to be what its proprietor claims for it, they can then try it on a larger scale with greater confidence, and if it should prove a humbug, they will have the satisfaction of knowing that they did not pay very dear for their experience.—*Planter.*

Turning Cattle into Fields.—The practice of turning cattle into fields after the crop has been gathered, is considered by many planters as so injurious to the land, that they will not even allow cross-fences, for fear of being tempted to do so. That the tramping of stock on some lands is injurious, there can be no doubt; but we think it is far from being an universal rule. Stiff lands are, of course, rendered more stiff and tenacious by the hoofs of stock, but what is injurious to such lands is often decidedly beneficial to loose, porous soils; and we think this is one of those cases. One of the very best planters we know in the up-country, never permits his stock to run in his fields, and we have no doubt but that his practice is correct, for he plants stiff land; while, on the other hand, we know another who plants light, porous lands in the low-country, who gives his stock the run of his fields, to improve his land by tramping, as well as to improve them. Our object in mentioning these opposite practices, by excellent planters, is to show the importance of studying the character of the soil we cultivate, before adopting what may have proved a most successful practice on the part of others. It is true, with regard to this particular practice, there is another point to be considered, whether the gleaning off of all the vegetable matter from fields, does not exhaust the soil more than is repaid by the feeding of the stock in this way.—We have heard many intelligent planters contend that it does, and it does not become us to say that such is not the case. But we think it would require very few loads of manure to make up all that a hundred head of cattle would glean out of a field, unless the vegetable matter was turned under in a green state, which no planter, with a full cotton crop, can find time to do. And if the stock are penned at night on dry straw and leaves, after running in the fields during the day, the planter will have far more than enough to re-pay what they have taken from his fields, besides what he will gain by the improved condition of his stock.—*Planter.*

THE TOMATO.

We often hear it said, that a relish for this vegetable is an acquired one; scarcely any body at first, liking it, but eventually every one becoming fond of it—if not prepared in every way, at least when prepared in some way or another; or it may hap, raw, without any preparation at all. It has, indeed, within a few years come into very general use, and is considered a particularly healthy article. It delights in rich ground, and is an abundant bearer. No farmer's or cotter's garden should be without it. His family, if like the writer of this, will soon want their tomatoes—once—twice—three times a day—morning, noon and evening! A nice way to keep the plant erect, and the fruit from the ground, is to drive down four stakes, so as to make a square of, say two feet each way, around the plant, and then wrap three or four wisps of straw or matting at suitable distances around the stakes. These will keep the vines from falling, and expose the fruit nicely to the sun for ripening. They will bear till frost.

I have already said I am a great lover of tomatoes; and as this is their season—and as housekeepers, as well as their *lords*, have been invited to throw in their mite to make the Cabinet useful—which, by the way, I take pleasure in looking over—I thought I would cull some receipts from my book. Do with them as you like. Though they may have been published before, they may, perhaps, again be worth their room.

Susanna P.

Newcastle, Del.

Farmers' Cabinet.

Tomatoes instead of Cucumbers.—Treat them much as you would cucumbers. Peal and slice them: season with plenty of salt; pepper and vinegar to your taste.

Tomato Catsup.—To half a peck of pealed tomatoes, put four table-spoonfulls of good salt, four do. black pepper, half do. allspice, three do. mustard, and eight red peppers, all ground fine, and simmered slowly with the tomatoes in sharp vinegar, for three or four hours. Use as much vinegar as to leave half a gallon of liquor when the process is over. Strain through a sieve, bottle and seal from the air. It may be used in a fortnight, but improves by age, and will keep for years.

Stewed Tomatoes.—Peal, slice and stew them slowly. When done, season them, thicken a little, and put in a small lump of butter, and eat them as you would apple sauce. If you have them thus prepared, with good roast beef, properly manufactured—sweet potatoes, and lima beans—and President Tyler should pop in upon you, unexpectedly to dine, you need wish nothing better: you'll find them first rate.

Tomatoes with Beef-steak.—Cut them in two, lay the flesh side upon the gridiron, over pretty hot coals, for a few minutes, turn them, season them well with pepper and salt, and when done, dress them with butter, or eat them with gravy, as suits you best.

Tomato Preserves.—Prepare a syrup by clarifying sugar, melted over a slow fire with a little water, boiling it till no scum appears. Take the tomatoes when quite green, peal them, and put them in cold syrup, with one orange sliced to every two pounds of your fruit: take pound for pound of sugar; simmer them for two or three hours over a slow fire. When a superior article is wished, add fresh lemons sliced, and boil with the tomatoes a few peach leaves, and powdered ginger in bags. Tomatoes, even when ripe, make a fine preserve, treated as above; but unless great care is used in the process, they will fall to pieces.

Tomato Tart.—Roll out your dough very thin, and place it on the plate in which you intend baking your tart, and slice your tomatoes very thin; spread them over the dough also very thinly, take about two table spoonfulls of brown sugar, and one of ground cinnamon bark, spread the two over the tomatoes, bake it well, and you have a delightful tart.

Pickled Tomatoes.—Place your tomatoes in layers, in a pickling jar with garlic or shred onions, mustard seed, horse raddish, red pepper, spices, &c., as wanted, until the jar is filled.—A little salt must also be added, as the layers are put in. When the jar is filled, pour over the tomatoes good cold cider vinegar, till all are covered, then close up tight for use.

Tomato Omelet.—Slice and stew your tomatoes. Beat up half a dozen fresh eggs, the yolk and white separate; when well beaten mix them with the tomato—put them in a pan and fry them, and you will have a fine omelet.

Tomatoes for Winter.—They may be preserved for winter use, by placing them in layers with salt, in jars or tight boxes. When wanted they must be soaked in water, as you soak cucumbers preserved in the same way. Some steam the tomatoes till well cooked, then spread the mass on plates, or other smooth surfaces, and dry them fully, when they can be put in bags and kept in a dry place.

Some are fond of them raw—eating them as we eat an apple.

RYE FOR SOILING.

Crops for soiling during the early spring months, before grass is advanced; in the drought of summer, when it has become parched up; and late again in autumn, after it is injured by frosts, are beginning to be thought of as of more consequence than formerly, and considerable attention is at length directed to their cultivation. For green food in the spring, we know of nothing that comes forward so early as rye, and till it begins to head, there are few grasses more nutritious, especially for milch cows. It is important therefore, that still greater attention should be paid to the cultivation of this grain, for pasture or soiling. From the 1st to 15th of October is the best time to sow rye in the latitude of 40° and farther north, and we trust that every farmer will prepare at least a few acres for the early feeding of his stock. As soon as the mild weather of spring opens, cattle are sure to hanker for green food, and this is the time, if it be withheld from them, that they seem to suffer most for the want of it, and thrive the least. A dry gravelly soil suits it best; but it also flourishes in thin sandy soils, and on stiff clay, when these lands are in good heart. For soiling, an extra quantity of seed should be sown, so as to ensure its coming up thick and covering the ground well. One and a half to two bushels per acre is better than less; and on stiff clay soils, where all the seed is not likely to take, three bushels is still better. But above all, get it in early, so that it may have a good growth before winter approaches; it will then start much quicker in the spring, and make a thicker and more rapid growth.

N. Y. American Agriculturalist.

Do not neglect to save the best and earliest specimens of your crops for next year's seed.

IMPROVEMENT OF CORN, WHEAT, &c.

To the Editor of the American Farmer:

I had the pleasure, a few days ago, of showing you a couple of stalks of corn, *each containing seven perfect ears.* They were taken from a field of twenty five acres, on the farm of Gen. T. M. Forman, of Cecil county, Md. and were a fair sample of the crop. General Forman informed me that he had many years ago adopted the plan of selecting his seed corn, always taking it from the stalks that have the greatest number of perfect ears; and that by continuing this practice he has brought his corn to the high quality represented by the specimens alluded to. This has been uniformly the result with all who have perseveringly practiced it. The first, I believe, to do so, was Mr. Cooper of New Jersey, forty or fifty years since; then the "Maryland twin corn" was produced by some gentlemen on the Eastern Shore: then the Baden corn was announced, and the Mercer corn, also; all were produced in the same way. General Forman intends to measure an acre, which shall be a fair sample of the whole field, and let us know the quantity of shelled corn it shall have produced; this will enable our farmers to compare the product of this corn with that of the common kinds.

A word or two on the utility of attending to such things by our farmers. The wonder is that every body does not do it, and the only reason I can suggest for its not being done, is, that people are not generally aware, that all kinds of plants may be improved by careful attention to *breeding*, just as much as animals are. There are at this day very few farmers so ignorant as not to know that their horses, cattle, sheep and hogs, are wonderfully improved by a judicious selection of breeders. You will scarcely find a farmer now that does not improve his stock by this means. I need not enlarge on this fact. But where are they that improve their corn and wheat, and rye and oats, in the same way?—They are only found here and there, and so seldom, that they are considered prodigies. Every body, almost, when he wants an improved article of this kind, purchases some celebrated kind for trial, which may or may not be what is represented, or may or may not suit his soil or his climate; but never thinks of improving what he has already got. No one ever thinks of crossing the breed of his corn, wheat, rye or oats, and thus improving them; and very few even take the trouble of selecting the best of that which they have for seed. Let me assure our farmers that they can improve their corn and all other crops by *cross breeding*, just as easily as they can their animals. They can change the size and color of the cob; make the corn early or late, yellow or white, soft or flinty; all by *cross breeding*, with no cost and very little trouble.

Generally, all that is done to improve our crops is by manuring the lane and cultivating the growing plants. Now for a moment let us see how it would do in improving animals, merely to feed them well and give them good stabling, paying no attention at all to the selection of breeders. All will admit that stock raised and kept in this way would soon "run out," no matter how good it may have been at the beginning. Well, what is high feeding of stock but analagous to high manuring of land? The one feeds the cattle, the other feeds the crops; neither does any thing more than supply the wants of the individual animal or plant. It does not and cannot change the character or quality of its progeny. When *feeding*, either of plants or animals, does all it can, it does no more than simply keep the individuals as they were, in reference to their natures—it generally produces a good crop, or a fat animal, and that is all.

"But," I anticipate I shall be asked, "*how* are we to improve our corn, wheat, &c. by cross breeding?"

Wheat, rye and oats may all be treated alike—and the process given for one will answer for all. Take several *good kinds* of wheat, bald headed and bearded, blue stem, purple stem, red and white, five or six kinds in all; mix them together thoroughly, and sow the parcel in some good ground at a considerable distance from any other wheat field. At harvest time go into the field and select the best heads, those that are largest, best filled, and that contain the best grains, on the shortest and robust stalks, and keep the seed for another year's sowing. The next year at harvest make the same selection for seed. Continue this selection for two or three years, and then you will find you will have a wonderfully improved variety of wheat. But to keep the quality of this new wheat up to its standard, and even to continue the improvement, you ought always to select a quantity for the succeeding year's sowing in the same way. This is not as troublesome as at first sight it appears to be. A half a bushel or a bushel of seed wheat may easily be selected in this way in a few hours—hours that possibly might not have been devoted to as profitable employment.

The *cross breeding* of corn requires a little more trouble. You have an excellent kind of corn, but it is late in maturing and has rather a large cob. Select some other kind of corn that ripens as early as you desire, and has the right sized cob. Plant your late kind as early in the spring as you can, in every alternate hill, leaving the other hills vacant. At a later period, say 20 to 30 days later, (according to the difference between the two kinds,) plant the vacant hills with the early corn. The place of the experiment should be remote from any other corn field. Cultivate both in the usual way, until you observe the tassels of the early kind beginning to push. Then carefully cut out all the tassels of this early kind—do nothing to the late kind. Watch carefully and cut out all tassels as they appear from this kind. When the corn is ripe, select all the good ears of the early kind for next year's planting. Plant this selected seed in the usual way the second year, and when ripe select the best ears of the earliest ripening. You will find in these ears a variety of grains in shape and color, and of different quality—there will be grains resembling both original parent stocks. Now select the grains that suit you. All the grains will produce a small cob and early corn; but some of the grain on the cobs may be small and inferior like the original parent; therefore on this the third year, select the grains. Generally this third planting will establish the variety; but the better way is to continue to select your seed every year. You may now select seed with a view to increasing the number of ears to the stalk; but take care to avoid selecting small ears simply because there are many on the stalk. If you find a stalk with three full sized ears, it is better to take them than those from a stalk that has four small ones.

By these means corn is susceptible of almost any degree of improvement and change of character; and I am fully satisfied that there is no one branch of agriculture that would so well pay for the small amount of labor and attention required.

SALTING HORSES.—A curious fact is mentioned in Parker's Treaties on Salt. "A person who kept sixteen farming horses, made the following experiment with seven of them which had been accustomed to eat salt with their food. Lumps of rock salt were laid in their mangers, and these lumps, previously weighed, were examined weekly, to ascertain what quantity had been consumed, and it was repeatedly found that whenever these horses were fed on hay and corn, they consumed only about 2¼ or 3 ounces per day; but that when they were fed with new hay, they took six ounces per day." This should convince us of the expediency of permitting our cattle the free use of salt at all times; and it cannot be given in so convenient a form as rock salt, it being much more palatable than the other article in a refined state, and by far cheaper. A good lump should always be kept in a box by the side of the animal, without fear that it will be taken to excess.—*Selected.*

MR. EVERETT'S SPEECH.

Agriculture—its importance—necessity and march of improvement.

Hon. Edward Everett, our Embassador at the British Court, was a guest at the annual dinner of the Royal Agricultural Society, at Derby, July 14th, when upon his health being proposed by the Chairman, Earl Spencer, he responded in the following speech, which embodies truths of which too many professed statesmen are unaware. We bespeak for them a consideration and due application by our own countrymen.

Mr. Everett, upon rising to return thanks, was received with loud and long-continued cheering. He said—My lord and gentlemen, I assure you without affectation, that when I consider the kind manner in which you, my lord, have spoken of me and my country, I am almost overpowered by my feelings, and want words to express them. (Cheers.)

Such a notice, from such a company, of myself and my country, from the intelligent assembly of English noblemen, and gentlemen and yeomen—from you, my lord, who have borne the flag of your country with honor on the sea—(cheers) and who sustain a position of such importance and respectability on shore—sir, I want words to thank you as I ought. You have done me no more than justice, I assure you, in ascribing to me the kindliest feelings towards the land of my fathers. (Cheers.) My lord, I am a great believer in the efficacy of race and blood. I do not think it is confined to the question of Short Horns and Herefords, and South Downs and Leicesters. I believe in the race of men as well as in the inferior animals.(Cheers.) Attached as I am, ardently, passionately, to my own country, desirous to strain every nerve in her service, and, if need be, shed every drop of blood in her defence—(cheers)—I yet rejoice that my ancestors were the countrymen of your ancestors. My lord, the sound of my native language beyond the sea is music in my ears. (Cheers.) I do rejoice that when I speak my own mother tongue I speak in the mother tongue also of a kindred people like that of yourselves—(cheers)—and, my lord, if there is any occasion—if there is any meeting that ought to bring us together as brethren, is it not a meeting of those devoted to the great parent art, the common interest of civilized nations?

Oh, my lord, I believe that if one-thousandth part of the energy, of the skill, of the treasure that have been expended by rival nations in the deadly struggle of what is called "the field," had been employed in a generous emulation to see who would excel the other in the arts of peace, [cheers] I believe my lord, if this had been done, your fathers would have driven us diplomatists out of the field (cheers); at any rate you would leave us very little to do in carrying on angry international discussions. You have been pleased to allude to the important commercial connection between our two countries; it is important, and most earnestly and heartily do I wish it might become more so. (Cheers.) But there is a thought on the subject which has struck me, since I listened to your lordship's instructive speech last evening, illustrating the incalculable importance of agricultural pursuits.

The commerce between our two countries is the largest that is carried on between any two countries on the face of the globe. The annual commerce between Great Brain and the United States is nearly twofold that which you carry on with any other people. The entire annual movement of this commerce both ways—your exports to the United States—your imports from the United States—either of them singly being twice as great as your commerce with any other nation. And yet what think you it amounts to? About as much as the annual crop of oats and beans in Great Britain. [Cheers.] I take the fact from the instructive essay of your worthy colaborateur, Mr. Pusey.

One more fact to show the importance of your agriculture. The whole foreign commerce of Great Britain, in pursuit of which you overshadow the ocean with your fleets, and plant

your colonies in the farthest Islands, is actually less in value than the annual grass crops of these islands. [Cheers.] It does not become me, my lord—I will not say as a stranger—by your kindness you will allow me to throw off that name [cheers]—but as your guest, it does not become me to enter into great details on this occasion; but it struck me in going over your implement yard this morning, that however inactive and neglected you may have been heretofore in the improvement of agriculture, there is nothing to complain of now.

It does seem to me that there is an amount of science, of mechanical skill, of practical sagacity, of capital, and of attention, on the part of the higher orders—of diligence and perseverance on the part of the intermediate and laboring classes, combined, for the promotion of agriculture, that has never been equalled in the history of the world. [Cheers.] And it is a most remarkable fact, if you will allow me to indulge in a general reflection, that till lately all great discoveries and improvements in agriculture seem to have been the product of the very earliest infancy of mankind. Who can tell, my lord, when that instrument that lies at the basis of all civilization, the plough, was invented? Who can tell when man first called in the humble partners of his labor, the horse, the ox, the cow, the swine, the sheep, and took them into profitable alliance with himself?

If you could find out who was the shepherd that first caught the wild dog, and taught him to keep and tend the flock, you ought to rear a monument of brass or marble cenotaph to his memory—a higher monument than was ever raised to hero or monarch. Who knows where the cereal grains or the esculent roots were first cultivated? There is but one of them, as you know, the potato, of which the history is known; all the rest retire back into darkest antiquity. They were cultivated at a time when your ancestors were roaming over the morasses of the now beautiful, free and merry England,[cheers] when our ancestors were roaming painted savages through the land. Ay, when the Romans and Greeks were living on beach nuts and acorns. [Hear, hear.]

It seems in fact, that in reference to the progress of agriculture, mankind has followed that curious law which Mr. Owen alluded to at the council dinner yesterday: the law that governs the ruminating animals in the tropics. He pointed out to us most beautifully that the ruminating animals there have a large fat hump between the shoulders. This is nourished and grows in the first five months of the year when there is plenty of food, and they get along with the hump as well as they can through the seven succeeding months of scarcity. So it seems with mankind with respect to agricultural discoveries. In the very infancy of the race they got this large fat hump between the shoulders, and 3000 years they lived upon little or nothing else. [Cheers and laughter.] The very plow that we read of in Virgil we may now see in the south of Europe.

We see it still in the hands of the peasantry, as we discover it in bas-relief on the sculptured remains of antiquity. It is a most pleasing fact that this revival of the great art of agriculture in these latter days of the world is the work of the Anglo-Saxon race of which you have spoken. It has been left to you, and if you will permit me, to us, living as we do in this ungenial clime, beneath these weeping skies; (the rain was at this moment descending in torrents, and the observation was loudly cheered) it has been left to us to do that which not Italy nor Greece has been able to do, with all their sunny climate.

Yes, and it is the want of those tropical luxuries, those enervating breezes of the south, that has given you, that has given us, that hardihood, that perseverance, that industry, that resolution, that are worth all the spices and all the gold of the tropics. [Cheers.] Yes, it is this that enables you to make that boast in which I hope you will permit me, for my country, to join—

"Man is the noblest growth our soil supplies,
And souls are ripened in our northern skies."

—[cheers.] I beg your pardon for the the length of time I have detained you. I assure you that when these shouts shall be heard across the Atlantic, as they will in 18 or 19 days, they will be echoed from hearts as warm as yours—[cheers.]

NEWBERRY AGRICULTURAL SOCIETY.

The Committee on Wheat submit the following Report:

The land which they regard as being best for the production of that grain, is upland, of a red or mulatto cast. Experience, however, hath shown that it may be successfully grown on any land in this section, not too wet, with the use of plenty of cotton seed as manure. Indeed old land, manured thus, they think preferable, on many accounts, to fresh land unmanured. No land however, which has been cultivated greatly too wet in summer, should be sown to wheat the succeeding fall; as it is next to impossible to make it produce freely, even by manuring, until it has been exposed to the frosts of one or two winters. Other manures, besides cotton seed, may possibly be equal to that, for this grain; but so far as their experience has gone, it is not the case. Stable dung, or any compost of which that forms a considerable part, if applied at the time of sowing, would in their opinion, render the grain much more liable to rust; while they regard cotton seed rather as a preventive against it. On ordinary land, as many cotton seed, in number as there are grains of wheat required, they think would insure a fair crop. Should the land be greatly exhausted however, more might be profitably applied—even to the amount of forty or forty five bushels per acre. Before sowing, the bushes, if there be many, should be cut or grubbed up.

The time of sowing should depend in a great measure, on the kind of wheat to be sown.—The spring wheat will frequently do well, sown as late as the middle of December; whereas all the varieties which ripen late in the season, require to be sown as early as the middle or even the first of October. The condition the land may be in at the time, all other things may be ready for sowing, should always have its influence. The land, they think, cannot readily be too dry, at the time of putting in a wheat crop to permit it to do well; whereas, the chances of a crop would, in their opinion, be materially lessened by plowing in the grain when the land was at all too wet.

The seed, of whatever variety, should be selected from a crop which had matured well, and (at the time of sowing) should be clear of cheet, oats, cockle, &c., as well as all small or defective grains; and to prevent irregularity in ripening, should form itself, but one distinct kind. To prevent a failure from any defect in the seed, they would suggest that a few weeks before sowing, after thoroughly stirring the husk, a small handful be taken therefrom, and after counting and noting the number of grains, it be planted in moist earth, with proper intervals between grains, where poultry or other stock cannot disturb it, and in a week or ten days, the number of stalks which will have come up, when compared with the number of grains planted, will show with tolerable certainty, to what extent the vegetating properties of the bulk can be relied on, and the quantity per acre, in sowing, regulated accordingly. Three pecks (of good Wheat) per acre, on ordinary good land, when sown early, and the grains of ordinary size, they think enough. That which is sown late, having less time to spread, would require as much as one bushel per acre; as well as all very large grained wheat, as it will require more in quantity of the latter, to contain an equal number of grains, with the former.—The quantity per acre of all the varieties, should be greater than suggested, on very rich land.

All seed wheat should be soaked about twelve hours, in a solution of Blue-stone, using at the rate of about one pound to every five bushels of wheat. What is intended for one day's sowing may be thrown in some vessel that will hold water, at night, and the Blue-stone dissolved in a quantity of water sufficient to cover the wheat, and poured over it, stirring it thoroughly at the time, and again before bed time. This, should the weather be unfavorable, would, they think, remain good there for several days. They have never known smut to injure a crop of wheat materially, where the seed had been thus prepared; and feel confident it will operate as a preventive. They farther think it not impossible that the use of the Blue-stone may kill many small and immature grains, which might otherwise come up, and produce chess or cheat. They think cotton seed (when used) should be applied in all instances before the wheat is ploughed in. One of your committee omitted to apply cotton seed to a part of his wheat crop in 1834 or '35, until after the wheat had been ploughed in; and the consequence was, he lost, in his opinion, from three to five bushels per acre. The cotton seed seemed not to have benefitted the crop at all, although applied plentifully.

For ploughing in wheat, especially when cotton seed has been used as manure, they prefer the twister plough, if made so as to turn what land it cuts at each furrow bottom upwards; thus burying the cotton seed and wheat together. They would prefer that the plough should not run more than one and a half, or two inches deep.

The surface of the land should be left as even as possible after the ploughing. For this purpose they recommend the drawing of a large brush, a harrow or roller, over the land, after the ploughing. This will prevent considerable waste in gathering the crop, in addition to the advantage afforded it while growing. Stock of all kinds should now be kept off the land. Even poultry, if permitted to run in considerable numbers, on a wheat field, especially when the crop is young, they think calculated to injure materially the chances of a crop.

One of the causes of failure in a wheat crop, especially early sowing, is believed to be Hessian Fly. Upon that subject, we copy the following from the "Philadelphia Saturday Courier" of May last. We do not undertake to vouch for the correctness of the opinions expressed, but think the article worthy of some consideration.

"As you know this is a wheat growing district, and our farmers may be supposed to know something of whatever concerns the cultivation of that grain. They entertain an opinion with regard to the Hessian Fly and its appearance, which is natural, and which my own observation has convinced me, is in accordance with the truth. It is a big-bellied insect, which makes its appearance in the fall, when the mildness of the winter will admit, especially at that season called *Indian Summer*, and its coming is easily discovered; when it alights upon the ground, it divests itself of its wings, and assumes the appearance of a large black ant, and from its hurried manner, seems to be seeking a place of deposite for its eggs; this it soon finds, either in the crevices of the ground, under a clod, or in the wheat plant; and not always in the latter as is sometimes supposed. After the egg is deposited, the insect seeks shelter for itself in the ground, where it remains during the winter; and either it or its progeny appears again in the spring, to go through the same work of destruction. The opinion is entertained by some, that the egg deposited in the fall, remains to be hatched in the spring,—but not so; nature makes better provision for her creatures, than to cause the egg to be laid in the fall, exposed to the frosts of winter, to be hatched in the spring.—The egg laid in the fall, does its injury to the grain, then or not at all; its effect is then perceptible; and it is the re-appearance of the fly in the spring which repeats the evil. My observation has convinced me that this is the Hessian Fly; and that there is a most infallible remedy for its destruction, as certain as it is sim-

ple—the use of the Roller. A very little care and observation at that season of the year, when the farmer expects its appearance, will discover its presence; and then is the time, whether it be spring or fall, to roll the wheat fields; the weight of the roller not only destroys the insect itself, whose size and shape prevent escape, but destroys also the tender egg, whether deposited in the wheat or elsewhere. I have used the roller for six years, and I have never seen the effect of fly in my wheat, while crops around me have been partially destroyed by it."

A week or two before the wheat begins to head, the bushes and briars being then covered with leaves, and readily seen, should again be cut down. A narrow tool should be used, as it will damage the crop least. All which may get tall enough after that time, to meet the scythe in cutting the grain, will be so tender, as not to be in the way.

The heads should be ripe before the harvest commences. At that period, a careful hand should go through the best spots of wheat, before cradling, and cut off, one at a time, the largest and best heads, gathering in this way when sown, to produce seed for a crop. This, they think, should be sown at the rate of half a bushel per acre, on land well manured with cotton seed. By this means, not only the size of the head, but the size and quality of the grain may, in a few years, in their opinion, be greatly improved, and the wheat clear of mixture. The cutting and binding should be done with a view to saving all, which may very nearly be accomplished, for the foregoing suggestions have been strictly followed. If the wheat is intended for the thrashing machine, and can be thrashed when hauled, the sooner it is hauled the better: by being left out, the straw becomes trash, and (if not hauled in when damped by rain) the head is likely to pull off when entering the machine, and pass through with the grains in it. If the grain is intended to be trod out by horses, the drier it can be got in the better. Wheat should never be hauled in, and packed away with the straw damp, to remain more than a few days, or the weavel will destroy a great deal of it. After the wheat is thrashed, it should have one thorough sunning, if not already very dry, before grinding; if not ground shortly, the sunning should be repeated once or oftener, and put up as warm as the sun will make it. The weavel may thus be prevented from injuring it in the least after thrashing.

If these suggestions are carried out,—keeping in mind all the while the truth contained in the following homely sentences, so applicable to every pursuit connected with Agriculture, viz: "whatever is worth doing, is worth doing well," your Committee believe, that a failure in a wheat crop, with those who sow, would happen but seldom.

PETER HAIR, } *Committee.*
W. HERBERT, }
S. C. Temperance Advocate.

CORN STALK SYRUP.—Mr. H. J. Chalmers, of Monroe county, has politely left at our office, a bottle of SYRUP, made from the common Corn Stalk. We have *tested* its quality, and can pronounce its saccharine flavor to be milder and richer than any of the Louisiana Syrup we ever tasted—it has nothing of the acidity often detected in other Syrups, and particularly in molasses; but leaves upon the palate a pleasant and agreeable sensation, that irresistibly makes you smack your lips.

Mr. Chalmers refers us to a communication he sent the Messenger, shewing his experimental operations in making the Syrup, but as it has not yet appeared in that paper, we are deprived for the present, the gratification of presenting it to our readers.

Mr. C. informs us, that he is perfectly satisfied he could have made Sugar; but he had no shallow kettles for the purpose, nor could he procure any. He is so well pleased with the little experiment he has made, that he intends going more extensively into the business next year, and patriotically exclaims, "I trust the day is not far distant when the Planters of Georgia will become independent of the West Indies and Louisiana, for their Sugar and Syrup." Let our Planters but enter upon the business with the same spirit and zeal that actuates Mr. Chalmers, and the day will not be far distant when his hopes will be realized—may he live to see it.

Macon Telegraph.

CORN STALK MOLASSES.—Mr. H. J. Thompson, a thorough going, enterprising planter of this county, called at our office a few days since to exhibit to us a specimen of molasses, made by himself from the common corn stalk. We have given the article a fair test and do not hesitate to pronounce it equal, if not superior to the best "sugar house molasses." It is equally as transparent, and in flavor resembles very much the "Florida Syrup," an article which is manufactured from the juice of the cane, and which, where it is known, is esteemed superior to any other for table use. Mr. Thompson informs us that he was induced to make the experiment from reading an article in our paper last spring. It was then too late to plant for the purpose, and he resolved to set aside a small patch which had been planted in the ordinary way, for the purpose. From this he removed the ears as they put forth, and allowed it to stand until the fodder was ripe. Having constructed a mill for the purpose, he expressed the juice from the stalks and boiled it in a common kettle, reducing about seven gallons to two, which produced the fine specimen of molasses which he has exhibited to us. Not having planted his corn for the purpose, Mr. T. is unable to come at any thing like a very nice estimate of the amount which any given quantity of land would yield—but he assures us that the test which he has given the matter, in the manufacture of the twenty-five or thirty gallons which he has made this year, has not only satisfied him that the best of molasses can be made from corn stalks, but that he can obtain a better return for his labor from its cultivation than from any other crop. A specimen of the molasses made by Mr. Thompson may be seen at this office.

We have been informed by Col. Jno. B. Walker that he is now making some experiments in the Corn Sugar and Molasses. The Colonel is desirous of ascertaining the yield, and with this view has scarcely measured the ground planted for this purpose. We hope to be able to give our planters the result of Col. Walker's experiments in a few days.

Madison Miscellany.

CORNSTALK MOLASSES.—We acknowledge the receipt of a bottle of what we should have pronounced, had we not been informed to the contrary, first quality *Sugar House Molasses*, it having the appearance of that article. It was manufactured from corn stalks, by James S. Pope, Esq., an enterprising planter and farmer of this district, who has spared neither pains nor expense in bringing to perfection an experiment, which has so often been tried, but we have never heard of its having been brought to so successful an issue in this district. We wish him success in his future experiments. The following explanatory note accompanied the bottle of molasses.—*Edgefield Advertiser.*

Mr. W. F. DURISOE—Dear Sir—I take the liberty of requesting you to publish for the information of the public, an experiment which I have lately made in extracting syrup from the corn stalk. I allotted about seventy hills square for my experiment, from which I made about twenty-five gallons of syrup. I present you with a specimen, which will enable you to judge of its quality. I deferred too long in stripping the shoot from the stalk. I think if the shoot had been stripped in time, the yield would have been increased. I am inclined to think that an acre, if in a high state of improvement, and well cultivated, can be made to yield *at least* seventy five gallons. The corn should be drilled, and the drills about three feet apart.—Planting in this manner, will prevent the corn from shooting (so it is said,) and will enable the stalk to retain the juice. It is evident that the shoot should not be permitted to remain on the stalk until the grain begins to form.

Yours, respectfully,
JAMES S. POPE.

IMPORTANCE OF AGRICULTURAL ASSOCIATIONS.

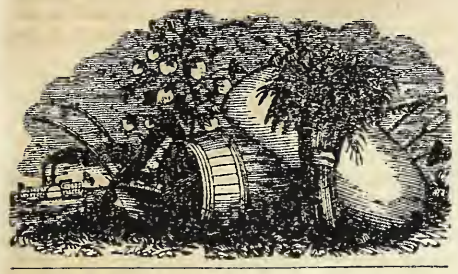
Again, as agriculturists, we have been remiss in associated efforts for the advancement of our calling. When acting as politicians, we are sufficiently awake to the importance of concentrated efforts. On moral and religious topics, none of us forget "in union there is strength."

The benefits arising from agricultural associations, experience has demonstrated to be—the more general attention to the subject of agriculture, which they are the means of exciting through the entire mass of the farming community where they are situated; the emulation which they excite among members to excel; the means which they are of introducing improved varieties of animals and products, and improved processes of breeding and cultivation; and, finally, in the information which they diffuse by actual inspection and comparison of animals and products, which their fairs call together.—We have only to refer to sections of country where properly constituted societies have been in efficient operation, to witness the existence of these effects. The Highland Society of Scotland has been founded a little over half a century—59 years, if we mistake not—and it is not too much to say, that it has revolutionized the agriculture of that whole country. An inhabitant of the more fertile sections of New York, where nature repays the least and the most indifferently directed efforts so bounteously, can scarcely conceive the disadvantages under which the agriculturists of the Scotch Highlands (if the recently disarmed retainers of the Highland chiefs, whose hands were far more familiar with broadsword and firelock than with the reaping hook or plough handle, could be termed agriculturists) labored fifty years since. Sterile mountain and unprocubtive moor, extensive marshes and wet cold clays, occupied a greater portion of the country; but now Judge Buel states, on the authority of Sir John Sinclair and Professor Lowe, that the acreable products of Scotland double those of our Atlantic States, and he assigns the principal part of this change to the agency of the Highland Agricultural society. England, too, has derived immense benefit from similar associations, whose history and progress would be highly interesting and instructive, did time admit of the examination. The Berkshire, Worcester, and Essex Societies, in Massachusetts, have met with the most decided success, and annually increase in numbers and in spirit. Each pay out annually, in premiums, upwards of a thousand dollars, half of which is drawn from the State Treasury; and we have the best authority for stating, that these sums would not pay 3 per ct. on the increase of agricultural products which they have been the means of occasioning.

The increased interest to the subject of agriculture, and the spirit of emulation excited by these associations, never fails to exhibit itself in the most marked manner. There are few neighborhoods where there are not one or two individuals who will attempt to keep pace with the advancing march of their profession. Others are gradually incited by their example, or the fear of being surpassed by them, to similar efforts. Improved breeds of cattle, sheep, swine, horses, &c., as well as improved processes of cultivation, gradually extend.

New Genessee Farmer.

LADIES, VEIL NOT YOUR FACES.—A celebrated writer on sight, says that the wearing of veils permanently weakens many naturally good eyes, on account of the endeavors of the eye to adjust itself to the ceaseless vibration of that too common article of dress.



WEDNESDAY, SEPTEMBER 27, 1843.

BACK NUMBERS.—All new subscribers to the 'Southern Cultivator" can be supplied with the back numbers.

IMPROVEMENT OF CORN, &c.

As the season for harvesting this valuable crop is now near at hand, we commend to the reader's attention the article under this head, in this number, which we copy from the "American Farmer." The labor of selecting seed corn in the manner suggested, is indeed small when compared to the immense value of the seed over that ordinarily obtained from the crib at planting time, and we look forward to the day, as not far distant, when this mode of selecting seed will be very generally adopted by our planters.

CULTURE OF CORN.

We have to thank our friend Rutherford for the subjoined letter, giving his experiments in the culture of corn on a new system. We are the more obliged to him, who we know to be a young farmer, because of the excellence of his example to the old men, in giving us the results of his experiments—an example which we trust will not be lost on our planters generally. The experiment speaks for itself, and we commend the letter to the careful consideration of our readers—let them reflect upon its truths and improve upon its suggestions.

CRAWFORD CO., Sept. 15, 1843.

MESSRS. EDITORS—The communication which I am about to make, I designed making to the Albany Cultivator last year, and would have done so had it not been for my aversion to appearing in the public prints. I at several times thought of making the communication over a fictitious name, but reflected that facts are not so apt to be received *as such*, unless a man vouches for their truth in his own proper name.

It may be proper to say, in the outset, that I am cultivating land on Flint river, which I settled some four years since for my father, and which, in the common language here, is "as rich as land ever gets to be."

Last year I planted for experiment one acre of corn in the following manner:—The ground was first broken very deep and then laid off *two feet* each way—the corn planted in the checks and covered with the foot. When it was up about half leg high, I had it flat weeded and thinned to one stalk. When silking I had it flat weeded again, and this finished the cultivation—it never having been plowed at all. About the time the corn was grown, a severe wind prostrated it in several places, so that I feared my experiment would fail at last. In addition to this disaster, it being in an exposed situation, the squirrels destroyed a good deal—the outside row was, I think, entirely consumed. At a proper time I had what was left gathered, shucked out, and measured the ears in a barrel in the same manuer as we purchase and sell corn. I had one barrel shelled, and as I had no measure upon which to depend, I weighed the corn thus shelled. According to the weight of this barrel, the produce of the acre, as gathered, was five thousand one hundred and four pounds.

Now farmers differ as to the weight of a bushel of corn. In the Southern States it varies from 50 to 56 pounds; the latter being the maximum weight. This I allowed, and you will perceive, upon calculation, that this will make it 91 bushels and nearly half a peck.

I have given you the result of an experiment tried under many disadvantages. I will now give you the reasons which induced me to plant as I did. It is a fact well known, that corn matures better in a colder climate than ours, and from this I inferred that it suffered too much from the intense and *collected* heat of the sun in our climate. This is one reason why I planted so close, for when grown in midsummer, the ground, and therefore the roots, would be protected from the sun by the shade of the corn itself. Another reason was, that in appropriating a given number of stalks to the acre, they had better be planted at equal distances from each other in every direction, so that the roots of one stalk will not interfere with those of another. By this system you make it more profitable, as every particle of earth will be reached by the roots, and no portion of soil be free from effort while other portions are overtasked.

Another reason was, that when planted so as to shade the ground, (strange as it may appear,) it would better stand a drought, by preventing the largest portion of a shower from evaporating, as is the case where the sun has free access to the ground. That this idea may not appear so novel, I ask you to reflect that the spots which remain moist for the longest time in the woods are those which are covered with the densest growth.

Another was, that it would save labor in the cultivation; for when the corn is high enough to shade the ground, weeds and grass cease to flourish. And still another reason was, that it saved the necessity of cutting the roots with the plow. I know this is a controverted point among practical farmers; but I would just as soon expect that an animal would be more thrifty by having his limbs broken or his mouth lacerated, as to suppose that a plant would be more vigorous in consequence of having its leaves or roots injured. The latter, vegetable phisiology teaches us, serve as the mouth, and the former as the lungs, of plants. It has again been objected, that such close planting prevented the corn from getting *air*, which was necessary for its health. It has seemed strange that this objection should have been urged, for if a philosopher were experimenting in pneumatics, he would hardly say his receiver was "*air-tight*" if it had a crack of *two feet* in it. Finally, Messrs. Editors, we may theorize on the subject as much as we please, and there may be as many objections urged as it is possible to produce, yet unprecedented success and a full "crib" will answer them all—at least to my satisfaction.

There were two other acres connected with the one upon which the experiment was tried, part on one side and part on the other, planted and cultivated in the usual way. The product of both together scarcely equalled the one I report, though the corn had been worked oftener. This year I have planted some 8 or 10 acres after pretty much the same plan, and it is decidedly the best corn I have; the freest from weeds and grass, and will doubtless produce double of any other corn on the plantation, though the land is equally good elsewhere.

I am your friend, truly,

WILLIAMS RUTHERFORD, Jr.

NEWNAN, September 16, 1843.

Messrs. EDITORS—I see in the Cultivator, No. 15, page 114, a communication from Mr. John Farrar, of Putnam county, describing his mode of making corn. He states that his land is broken and stony, and to prevent them from washing, he ditches his hill sides. Would Mr. Farrar be so good as to inform us, through the Cultivator, his manner and mode of ditching; how wide, deep, and what distance apart they should be, and all the practical information he possesses on the subject? As the lands in our county are broken, and of a coarse sandy loam, and washes rapidly, if it could be prevented by ditching, the value of it would be considerably enhanced.

Would you give us in the Cultivator the price of plows, corn-shellers, straw-cutters, &c. in the Augusta market, and oblige yours, &c.

A. B. L.

NOTE BY THE EDITOR.—In answer to the enquiry of our correspondent, A. B. L., we will reply as distinctly as possible. A good article of Straw Cutters can be had at from $20 to $50; Corn Shellers, from $10 to $20, and Plows from $3 50 to $15, at the Agricultural Repository of Alexander Philip of this city.

THE FARMER'S PROFESSION.

The following is an extract from an address delivered before the Oneida County [N. Y.] Agricultural Society, by Anson S. Miller, Esq.

Princely patriarchs, prophets, kings, philosophers, the great of all ages, have honored agriculture with their particular regard. The pursuit is indeed laborious; but labor is no longer an evil, except in its excess. The cheerful performance of labor by man, has freed it from its original curse. It is now a boon of heaven—the condition of unnumbered blessings. The farmer's calling is full of moral grandeur. He supports the world—is the partner of nature, and peculiarly 'a co-worker with God.' The sun, the atmosphere, the dews, the rains, day and night, the seasons—all the natural agents—are his ministers in the spacious temple of the firmament. Health is the attendant of his labors. The philosophy of nature exercises and exalts the intellect of the intelligent farmer.—His moral powers are ennobled by the manifestations of supreme love and wisdom in every thing around him—in the genial air, the opening bud, the delicate flower, the growing and the ripening fruit, the stately tree—in vegetable life and beauty springing out of death and decay—

and in the wonderful succession and harmony of the seasons:

"These as they change, Almighty Father! these
Are but the varied God. The rolling year
Is full of Thee."

We are now beholding a mighty moral revolution. Hitherto, glory has been found in the *destruction* rather than the *preservation* of man. The history of our race is a history of wars.—An age of peace and philanthropy is arising upon us, in which renown will be sought in usefulness. Justice will yet be fully done to the benefactors of mankind. Young, and Watson, and Clinton, and Buel, and others, both of the dead and the living, who have laid society under enduring obligations, will receive their share of the public gratitude. How dim, how fleeting is the fame of the mere warrior, when contrasted with that of the philanthropist.—What wasting battles, what fields enriched with carnage, what spoils of victory, or what splendid triumphs, could confer the lasting glory of De Witt Clinton!

REMEDY FOR SMUT IN WHEAT.

Mr. Editor:—Your journal circulating extensively through the wheat growing portion of our own State, you will permit me to enjoin upon the wheat producers the necessity of brining and rolling in lime the seed bofore sowing, with a view to eradicate smut. This remedy for a serious evil, magnified the current season to an alarming extent by neglecting to practice it, is not new to the intelligent book-farming husbandman; and my only object now in addressing you, is to confirm the testimony of others.

I will briefly state, for the benefit of all concerned, the proof as practised last year by myself. I used two ordinary sized wash-tubs, one of which contained some four or five pails of strong brine, and upon the top of the other tub (resting upon two slats) was placed a bushel and a half basket of wheat. The brine was then poured upon the wheat, and was quickly deposited, by leakage through the basket into the tub below it. On emptying the basket, the same brine was used to saturate a similar quantity, and so on to the amount of ten or twelve bushels. If my memory serves me right, I used about a bushel of fresh slacked lime to that quantity of secd. After thus preparing it was carted to the field in barrels. The seed was sown upon the field which you saw, Mr. Editor, in July, when I had the pleasure of meeting you here, and I am certain of the fact, that not a head of smut was detected when harvesting it.

In regard to another field of some twenty acres, not having any more lime on hand when it was sown, I neglected to prepare the seed as above, and the consequence was, there was some smut, but not to that extent of some of my neighbors' fields. I shall take special care this season, to brine and roll in lime all my seed, and if my brother wheat growers desire to sell the "clean thing," and what is of greater consequence, make, if possible, their wives and daughters more amiable by having *white bread* —they will do likewise.

A word more. Your estimate sir, that the field which you saw would go 25 bushels to the acre, will be verified beyond a doubt. In many heads I counted from 80 to 100 kernels, and a few that I selected measured six inches in length. The variety is the red chaff bald.

L. A. Morrell.

Lake Ridge, Tompkins Co., N. Y.

New Genessee Farmer.

New Dish.—The Mississippi Valley Farmer says—By paring, quartering and boiling cucumbers, a dish may be obtained in every respect similar to asparagus.

Useful Hints.—Never enter a sick room in a state of perspiration, as the moment you become cool your pores absorb. Do not approach contagious diseases with an empty stomach; nor sit between the sick and the fire, because the heat attracts the thin vapor.

AUGUSTA MARKET.

Cotton.—In resuming, to-day, our brief notice of our market, which will be continued during the business season, we are gratified to be able to announce to our friends a decided improvement in the value of our great staple.—For some time the northern markets have been very much excited, because of the increased demand among the American manufacturers for goods, and the consequent short supply of the old crop in this country, which circumstance, of course, advanced the prices in all the American markets, to a rate quite as high as the English. Upon this excited state of our markets, came the late news, per Caledonia, advising of an advance in Liverpool of ⅛ to ¼d upon all descriptions—produced principally by the unfavorable accounts, from this side, of the growing crop; although it must be admitted that the general improvement in business, and the increased demand for cotton yarns and goods, has likewise had its influence; and, as a consequence of this news from abroad, our own market has advanced ¼ @ ½ cent ℔ lb. within the last few days. We now quote 6 @ 8¼ cents for old, and 8 @ 8½ cents for the new crop, with an active demand. Whether these prices will be sustained, will, in a great degree, depend upon the extent of the growing crop, and the continued demand for goods and yarns, both in England and this country, of which our readers can judge as well as ourselves. We are, however, of the opinion, that the interests of the planter are *generally* better protected when he gets his crop to market early and sells—*particularly* if he meet an active demand.

Dry Goods, Groceries, &c.—The indications of a return of more prosperous times is, perhaps, not more perceptible in any department of business than the mercantile; and we are gratified to announce to our country friends, that our merchants are fortifying themselves in every department with abundant supplies to meet the demand of their country friends. The stock will be ample, and the prices are generally ranging low.

Bagging and Bale Rope.—The supply of both these articles is heavy, and sales to a heavy extent are daily made. Gunny Bagging, which is most enquired for, sells from 19 @ 20 cents; Dundee at from 16 @ 20; Kentucky 17 @ 18 cents; and other descriptions at proportionate rates. Manilla Rope 9 @ 10; Kentucky Hemp 8 @ 9 cents.

Money—Central Bank notes sell from 9 @ 12 ℔ cent dis. State 6 ℔ cent Bonds at 72 @ 74 cents.

CONTENTS OF THIS NUMBER.

	PAGE.
Improvement of Domestic Stock	153
Green Manuring; New Method of making Manure	154
Bommer's Manure; The Tomato; Turning Cattle into Fields; Rye for Soiling	155
Improvement of Corn, &c.; Salting Horses; Mr. Everett's Speech	156
Report of the Newberry Agricultural Society on the Culture of Wheat	157
Corn Stalk Syrup; Corn Stalk Molasses; Importance of Agricultural Associations	158
Improvement of Corn; Experiments in the Culture of Corn; The Farmer's Profession; Ditching, &c.;	159
Remedy for Smut in Wheat; New Dish	160

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A GENERAL assortment of fresh and genuine GARDEN and FIELD SEED, among which are the following:

Red and White Clover,
Blue and Green Grass,
Rye and Orchard do.,
Timothy and Herds do.,
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No. 232 Broad street, Augusta, Ga.
August 30. 18-tf

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Large Globe Turnep, } Fine
" White Flat do. } for
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For sale in quantities to suit purchasers, by
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Aug. 30. 18-tf R. S. HARDWICK.

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And also to make Compost *in a few days*. And how to make a rich fertilizing liquid called "purin," having all the strength without the acrid qualities of urine.

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Farms up to 100 acres 10
" from 100 to 200 acres 15
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" " 300 to 400 " 20
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By the remittance of the sum here specified, a copy of the method will be sent by mail or in any other mode proposed by the purchaser.

All letters of inquiry must be post paid.
ABBETT & CO., Baltimore,
Proprietors of the patent right for the Southern and Western States. aug 16

THE SOUTHERN CULTIVATOR

IS PUBLISHED BY

J. W. & W. S. JONES,

And will be issued every other Wednesday, at ONE DOLLAR a year, INVARIABLY IN ADVANCE. The CASH SYSTEM will be rigidly adhered to, and in no case will the paper be sent unless the money accompanies the order.

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SOUTHERN CULTIVATOR.

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From the Transactions of th N. Y. State Agr. Society.

SUBSOILING—SUBSOIL PLOWS.

By C. N. BEMENT, Albany.

Heretofore the farmers of this country have cultivated a soil enriched for ages by the yearly addition of a fresh stratum of mould. From the first existence of vegetation upon the dry land, decayed plants, leaves, &c., have continually furnished a supply of manure, which the winds and rains have liberally spread abroad. As the supply was annually greater than the consumption, the earth, unexhausted by its productions, increased in fertility. The thick layers of vegetable mould which covered the face of the earth, was a storehouse of food for plants, and this quality increased by the conversion of wood into ashes by clearing. It is not wonderful, then, that for some years newly cleared settlements should abound in produce and require little more labor than that of plowing and reaping; for during this period the provision is wasting which for centuries had been accumulating. But the time will come, and indeed has already come in many sections, where the soil has been exhausted, and is took weak of itself to make plants grow with their former luxuriance. The grand question now presents itself, "how shall this soil be renovated and brought back to its former richness and fertility?" My answer would be, by breaking the under crust, opening and stirring the subsoil, by which means it so alters and disposes the earth in which plants are rooted, that the radigals shoot more easily and more extensively through it, or in other words, it becomes a better filterer for straining and applying nourishment to their inhaling or absorbing vessels.

It is a well established fact or axiom in agriculture, that the deeper the soil is, the more favorable will it be for the purposes of cultivation. To produce this desideratum, several plans have been adopted, either by thoroughly trenching with the spade, or by the use of the subsoil plow. Air and water are chief instruments which nature makes use of to enrich the earth.

It is by close attention to passing events that any desired object can ever be obtained. As far as experiments have been made, we find the earth liberally affording its produce in tenfold quantity, and the land that now supports an hundred inhabitants, may give equal enjoyment to a thousand. But in this stage a well managed farm must be carried on with more labor, more expense, and more exact skill. The most profitable system of culture is that which pays the greatest per cent on the money laid out in cultivation, while the land is yearly increasing in its productive powers, is a truth which no one will attempt to deny.

I have, for the last four or five years, had my attention directed, by reading in the agricultural journals, to the great benefits derived from subsoil plowing in England and Scotland, and have felt very anxious to obtain an implement for the purpose. For the last three or four years I have been making some experiments with merely an apology for a subsoil plow, as it only penetrated about five inches below the bottom of the furrow of the common plow, and the share was thin, flat, and only three inches wide at the broadest part; still, with this simple, and I might almost say, inefficient machine, I could see a very perceptible difference in the appearance of the crop, especially in a drouth. In 1841, I made an experiment in a field of corn, a part of which I subsoiled with my skeleton or apology for a subsoil plow, stirring the under soil only to the depth of five inches; in that part of the field where the under crust had been broken, the corn maintained a healthful, dark color, while that adjoining, which had not been stirred with the skeleton plow, turned yellow, leaves curled and looked sickly. In fact, the difference was so great that it was noticed by those passing, although some distance from the road. I also tried it for my carrots and beets, with the same decided effect. I have tried it on a stiff loam, and on soil inclining to sand, with equal success. This I was not prepared for, as I supposed such soils would not be benefited by the operation; but on examination, I found the subsoil, which had not been reached by the common plow, very compact, and nearly as hard as a beaten track on the surface.

As for myself, and from my own experience, I entertain not a doubt of the utility of deep plowing; not, however, by turning up the under soil, but by following in the furrow made by the first plow, with a real subsoil plow, which, if properly constructed, pulverises and stirs the earth from twelve to fourteen inches. Indian corn, and all tap-rooted plants, in such a mass of loosened earth, would not, I am confident, suffer much by an ordinary drouth. Like a sponge, it would absorb a vast quantity of rain water, and become a reservoir to supply the wants of the plants. Nothing is more common in a dry summer, than the rolling of the leaves of corn; and the circumstance is often mentioned as an evidence of the severity of the drouth.

There is another advantage in subsoiling. If the season is wet, it has the effect of partially draining the land, and causes the water to settle and carry with it any vitriolic or other noxious matters.

I am not aware that subsoil plowing has as yet, in this country, received much attention; but from my own experience, and several experiments made by different persons in different sections, and with very indifferent implements, the results have been such that I am led to believe that it will prove of very great advantage on old soils that have been long under cultivation.

E. Phinney, Esq., a very spirited and successful farmer in Lexington, Mass., in a letter published in the New England Farmer, in speaking of an experiment made with a substitute for a subsoil plow, in a field of carrots, says, "A part of my crop of carrots was sown upon the same land appropriated to that crop last year; no more manure was applied than in the previous year, and notwithstanding the very severe drouth which greatly injured most of our root crops, my crop on this piece of land was nearly double that of last year. There is no known cause to which I can attribute this great increase of the produce, but the use of my new constructed substitute for a subsoil plow. The soil was stirred to the depth of fourteen inches; by this means the roots of the carrots were enabled to strike deep, and thereby not only to find more nourishment, but to overcome, in a great measure, the effects of a very pinching drouth."

It is stated in the New England Farmer, "that B. V. French, Esq., of Braintree, Mass, raised the past season, over 22 tons per acre of white carrots, on ground not particularly well prepared for roots. He attributes this great crop principally to the use of the subsoil plow on the land the previous season."

The subsoil plow has been tried in Pennsylvania and Delaware, but I have not as yet seen any account of its effect on the crops. For deep rooted plants, no one, I think, will pretend to gainsay. Why do our gardens produce so much more to the acre than our fields? Is it not, in a great measure, owing to deep tillage and mixing the under with the upper soil?

Mr. Smith, of Deanston, to whom is awarded the credit of first successfully introducing the subsoil plow, in a lecture delivered before the Royal Agricultural Society of England, in July last, says, "When I first began to cultivate my own farm, although I had put in the drains, I found they were not so efficacious as I at first expected; and I then began to think of stirring up the subsoil, which gave rise to the idea of a subsoil plow. I thought I must construct an instrument which would execute the work with the least possible power. I made my plough very strong, and of that form to which the least resistance would be opposed, at the same time taking care to have sufficient power fairly to stir up the soil.

"I will here explain the principle of the subsoil plow, because I have found that many persons, although seemingly acquainted with it, have not a proper notion of the principle on which it is based. The great principle is, that there are many subsoils, which, though capable of being converted into a good soil, yet it brought up and mixed with the active soil, will so far deteriorate it as to make it for some time sterile. It therefore occurred to me, that the great point would be to stir up the subsoil, still retaining the good soil on the surface. Stirring up the subsoil would, in the first place, very much facilitate the escape of the water into the drains; and secondly, in consequence of the passage of the water through the stirred up subsoil, and the attendant admission of air, it would be so acted upon as to be converted into good soil, while, at the same time, I was having all the advantages of working the active soil as before."

Having treated of the process, and noticed some of the advantages derived from subsoil plowing, I will now endeavor to give a description of some of the implements made use of for that purpose, three of which are of European, and one of American manufacture. In proof of the estimation in which subsoiling is held in England, I would state that no less than eight subsoil plows were entered for competition and exhibition at the Fair of the Royal Agricultural Society, held in Bristol in July last.

The subsoil plow is not a new invention, but was in use in England more than fifty years ago, and recently brought into prominent notice by Mr. Smith, of Deanston, Scotland. In Dickson's Report of Lancashire, is the following notice of the "Miner or deep-stirring plow:"

"There is another tool of the plow kind, somewhat similar in construction, which was introduced into the country about the same period as the 'Trench plow.' It simply consists of a plowshare firmly fixed to a strong beam by means of a strong sheath and handle, without any mold board. It is usually drawn by four or more horses, being made to follow in the furrow of the common plow, so as to penetrate into,

loosen and stir up the under soil, without turning it up, to the depth of from eight to fourteen inches below the track in which that plough had gone."

The following description of it is taken from Mr. Morton's prize essay, published in the "Farmer's Magazine," (London,) of July last. Mr. Morton says, "Smith's subsoil plow consists of the ordinary frame-work of a plow, without the mold board, made strong enough to stand the shock and the strain to which an implement requiring the force of four or six horses to work it, must be subjected. The frame-work is of iron, and about 15 feet long. A sole-plate, on which a feather-shaped or pointed sock slips, is attached to it by means of two uprights or curved coulter. The height of the plow, when held in a working position, from the sole-plate to the beam, is about 22 inches. From the furrow side of the sock, a spur projects, over which the mass of subsoil cut by the coulter and share is raised and broken, and falls down again."

Now the American subsoil plow, made at Worcester, Mass., by Messrs. Ruggles, Nourse & Mason, differs from Smith's in several particulars. The handles and beam are made of wood, reduced in length, and in fact the whole implement is reduced in size, which makes it much lighter, and can be turned in the same space as the plow which precedes it. In place of the spur, as in Smith's, this has an inclined plane, which rises from the feather of the share, and extends back to the heal of the plow. It is about three inches wide, lies against the upright, and rises to the height of six inches behind. By means of a slat in the point of attachment, it can be raised or lowered at pleasure. With this inclined plane the soil is raised, pulverized, and partially mixed, leaving it in a loose, friable state, without bringing it to the surface. By this simple contrivance the draft has been so much reduced that two common sized horses are amply sufficient to work it in a stiff, loamy soil, from eight to ten inches below the bottom of the furrow of the plow that precedes it, but it must be free from roots and large stones. The greatest improvement however, and especially at the present time, is the price at which they are offered, being less than one-fifth of the price of the imported article. One of Smith's was imported in 1840, by Messrs. Ellis & Boston, of Boston, at an expense of $80. D. D. Campbell, Esq., of Schenectady, imported another about the same period, or soon after.

I have tried the Worcester subsoil plows, and can say I was much pleased with its performance, and more particularly with the ease in which the horses performed their work. Now, if the plow turns up a furrow six inches deep, and the subsoil plow penetrates and loosens the subsoil ten inches below the first plow, we have at least sixteen inches loosened soil, which in the common method of plowing, and allowing that the plough lays the furrow two inches higher than the depth of the cut, we have then but eight inches of loose soil for the bed of the plant.

The expense of cultivating by subsoil plowing, must be necessarily much increased by the present mode, as it requires an extra hand and team to go over the same ground, and at the same time of the first plow; and to diminish the expense of the operation of subsoil plowing, and to adopt them to the wants of the small farmers, several attempts have been made, in England, to combine the two implements in one. The first of these, by Mr. Pusey, called the Charlbury Subsoil Plow, "combines in one implement," says Mr. Morton, "both the plows used in the operation of subsoiling. It not only stirs the subsoil, but opens the furrow in which the subsoil plow works. It consists in the attachment of a strong tine, similar to those used in Biddle's Scarrifier, to the common plow, in a position in which it acts after the furrow slice has been turned."

"This implement," continues Mr. Morton, "doing all the work, requires, according to an experiment recorded there, less force to work it than the subsoil plow, doing only one portion of the operation. It cannot, however, be so efficient in thoroughly stirring the subsoil as the original plow." The other attempt at diminishing expense of subsoil plowing, is by Mr Armstong, of Stirlingshire, for which he received premiums from the Stirlingshire Agricultural Society, and from the Highland Society.

The following is a description of it, as given by Mr. Smith, at an agricultural meeting. It appears that the inventor has adapted the principle of Wilkie's turn-west plow to Smith's subsoil plow; and if I understand the principle of it, it is just what the American farmer is in need of, as one hand with one team can perform both operations.

The general frame work is that of a subsoil plow, rather under the medium size, and to it is attached a hinged mould-board, similar to the mould-board of Smith's hill-side or turn-west plow. By means of this arrangement, the plow can be used for removing the furrow preceding the operation of the subsoil plow, and when the furrow has been removed, the mould-board being moved upon its hinges, from its working position, rests over the beam of the plow, whilst the instrument is used for subsoiling in the bottom of the furrow just removed. Thus the operation of removing the furrow and subsoiling, can be alternately performed with the same implement, with the same plowman, and the same team of horses, by a single movement of the mould-board, which is done in an instant by the hand of the plowman, at each turning. The additional weight of the mould-board serves to keep down the plow whilst subsoiling in different grounds. The judges consider this implement well contrived, and as being an important boon to the small farmers, and as certain to give great facility to the extension amongst them of the admirable system of subsoil plowing.

From the Columbia (S. C.) Planter.

FAIRFIELD, August 30, 1843.

DEAR SIR—I feel ashamed of not having yet complied with your request, that I should send you a treaties on the manufacture, application and effect of manure. I will, however, compromise with my conscience, by promising to do so in a week or two. The fact is, I am so conscious of devoting less attention and labor to that department of plantation economy, than its importance demands, that I feel a repugnance to seeing my deficiency formally and mathematically computed. My present impulse is to discourse on the inexplicable subject of rust in cotton, and I will not thwart it.

In this section of country, we have two species of rust—the red or common rust, and the brown or French. I cannot give you the derivation of the latter term, but it is of general prevalence in this neighborhood. The red rust is that to which all varieties of land in this district are more or less liable; and the brown rust, or French, that which is only found on black-jack soils, and on the flat lands of the description of those on Dutchman's and Wateree creeks.

As Humbug jr. affirms, many theories have been adduced to account for the origin of the red rust, the partizans of each believing firmly in his own favorite, and denouncing those of others; and he accordingly treats as an absurdity, a creed of mine, which I consider I have incontestibly proven by an experience of nine years.

I commenced to till my present lands, and at the same time to cultivate the short staple cotton, nine years ago, under the tutorage of an observant, experienced and skilful overseer. In the early part of the summer, he remarked to me, that we should have to keep our cotton fields free of poke weeds and briars, if we meant to escape rust. This being a new idea to me, I of course ridiculed it, and so unmercifully too, that, as he afterwards told me, he forthwith determined that I should purchase belief by expensive experience. Accordingly, towards fall, he carried me to three several spots of rust in as many different fields, which he had contrived to produce by leaving poke-stalks in or around stumps, which happened to be there located.—They were the only spots of rust I had in my crop, and from every other portion of it had the poke been carefully eradicated. This coincidence staggered me, and its repetition for nine consecutive years, has confirmed my faith.

In riding by the fields of my neighbors, I have seen poke-stocks suffered to grow among the cotton, and have predicted to a companion (correctly, as it was proven,) that rust would be the consequence. On the other hand, I have first seen rust, and on searching for it, have found poke.

I do not say that rust may not originate without the presence of poke; nor do I believe that, like the celebrated upas tree, it exudes poison, deleterious to surrounding vegetation; but simply that poke, briars, strawberries, and perhaps other plants, are more liable to the disease than cotton; and having first become affected, communicate the disorder to their more healthy neighbor. Where poke has been repeatedly cut down in the early part of the season, and is suffered to grow at a late date, I believe it is harmless; for it does not appear to be liable to the disease till it has reached maturity, and commenced to decline.

A friend of mine spent a part of the last summer in this vicinity, and occasionally delighted me with a visit. At our first interview, he began, in unmeasured terms, to denounce the folly and superstition of "some ignorant citizens of the district," in believing that poke could produce rust. Like St. Peter, I was at first ashamed to confess my faith in so despised a doctrine, and, if I did not deny, certainly did not avow that I was a disciple. At each subsequent interview, I was gratified to observe that the opposition of my friend was melting away under the influence of accumulating proof, till at length, when I rallied and came to the rescue, his offensive warfare degenerated into mere defence of his doubts, and he finally determined to risk his remaining strength upon the issue of a single experiment, an opportunity for which then presented itself. In the midst of a large, healthy, flourishing field of cotton, he saw a small spot of rust, and he determined to surrender at discretion, if in the centre he should find poke weed. The poke was found, and he acknowledged himself a convert.

I may properly close what I have said of red rust, by stating, as a corollary, that though we do not know what produces it in poke or cotton, nevertheless, if poke, briars, &c., are more liable to the disease than cotton, and can communicate it, it is wise not to suffer them to take root in our fields. We know not the cause of the origin of yellow fever or small-pox, yet we know that they are communicable and infectious, and avoid persons and places suspected of being tainted with their influence.

Of the French or brown rust, though I suffer from its effects, I have very little to say. Some people have attributed it to the presence of iron in the soil, in some one of its chemical forms. Others (and I among them,) believe that it is caused by an undue proportion of lime in the soil, causing the plant to scald under the superadded influences of heat and water. I once saw the late Dr. James Davis, of Columbia, analyze soil taken indiscriminately from the land that is liable to the French, and the result was 7½ per cent of carb. of lime. Now, this is certainly a much stronger proportion than even 300 bushels of rich marl would give uniformly to the whole mass of an acre of soil, if thoroughly amalgamated with it. The flat creek lands, upon which this disease prevails, are not the alluvial bottoms; these are of a distinct character from the former, which lie between them and the sandy ridge.

I have found that late plowing promotes the French, and that compost manure is the best preventive.

Yours, very respectfully,

FARMINGTON.

From the Southern Planter.

PROPER DISPOSITION OF FARMING CAPITAL.

Mr. Editor—Every man in this country is more or less interested in the pursuit of agriculture; and the business of a commission merchant has rendered me as deeply sensitive to its interests as if I were directly engaged in its pursuit. After much consideration and attention, I am inclined to think that the want of success in this profession, proceeds from an error that I have frequently observed in my own. This consists in an attempt to do a larger business than is justified by the quantity of capital employed. It is true, that sometimes a "lucky hit" in trade will make all right, but ninety-nine times out of a hundred, failure is the inevitable result of an expansion disproportionate to the quantity of capital to be commanded.

How often do you see an individual with a limited capital embarking in the profession of a farmer, expend it all in the purchase of his land; which is about as reasonable as it would be in a merchant to sink his whole capital in a warehouse, without leaving any for the purchase of goods. Neither the one nor the other would be wiser than the silly fellow, who expended his last cent in the purchase of a purse.

I have grown grey in the pursuit of commerce, and it may be deemed presumptuous in an individual engaged in one pursuit to pretend to advise those in another calling, but the looker on can sometimes see what escapes the attention of the player, and for the last forty years I have been a not inattentive or uninterested spectator of the progress of an art on which my own pursuits were founded, and with which they were so intimately blended. It seems to me, then, nothing would more promote the cause of agriculture than a judicious division of the capital embarked in it. To make this division constitutes a rather difficult sum in arithmetic, one of the quantities only being known, but a practical man with a little calculation, can readily approximate it without even a recourse to algebraical signs. Suppose an individual desires to engage in farming, and that he has, we will say, ten thousand dollars to embark in the business. The first object is to ascertain how much land he should buy. Let him remember that it is only a certain degree of fertility that will pay for cultivation, and that within reasonable limits, the greater the fertility the greater will be the profit upon the investment. My advice to him would be to be satisfied with nothing that would not yield eight barrels of corn and twenty bushels of wheat, at least, to the acre. We will suppose that such land in the location he chooses will cost forty dollars an acre: very well, let him reserve four thousand dollars to purchase negroes, stock, implements, &c., and to afford him floating capital for at least one year's operations: this leaves him six thousand dollars for the purchase of one hundred and fifty acres of land. It is a small farm, it is true, and the owner could not be esteemed a great landed proprietor; but it is well stocked, well provided, very productive, and the owner with every thing well fixed and comfortable, free from debt and with a provision for accidents, is enabled to devote his whole energies to his business. How certain in such a case would be the annual improvement of his land, or the annual extension of his acres.

But let us contrast with this operation the course usually pursued by those investing in real estate. From an inordinate desire that seems to be born with us here in the South, to be the owners of "broad acres," the whole capital is expended in an extensive and barren waste, or probably half the purchase money paid, and a debt incurred for the balance. Little or nothing left for stock or implements, which are probably bought on credit, and are frequently of the rudest and poorest kind. Already saddled with a heavy debt, the interest on which begins to stare him in the face and haunt his imagination in his dreams, what does it avail to tell this poor wight of some improved implement of agriculture, or of a judicious system of husbandry? Why, if you advise him to pay a dollar a year or an agricultural newspaper, he replies, and with a great deal of truth indeed, that "he can't afford it." There is a perpetual struggle upon the part of this great *land owner* to keep body and soul together, and instead of ease, thrift, and improvement, he exhibits from year to year the increasing marks of care, poverty and want; until at last his great estate slips through his fingers and falls into the possession of some individual, perhaps, who having the means of improvement, doubles or quadruples the product, and thereby makes the whole an excellent investment.

It may be said that land worth forty dollars cannot always be found in situations to which particular circumstances may confine an individual. Let the purchaser then give ten dollars an acre for one hundred and fifty acres, and reserve the balance of the six thousand dollars for improving it; he must be very unfortunate indeed if he does not succeed in a few years in bringing it up to the forty dollar standard. What I mean to maintain is, that it would form a much more profitable investment, generally speaking, to buy one hundred and fifty acres of such land for fifteen hundred dollars, keeping thirty-five hundred dollars to improve it, than to pay the whole six thousand dollars for six hundred acres.

I have been led into these considerations by conversations which I have held with many of our farmers, who, apart from this common error into which they have fallen, are sound and judicious men. I have found universally a much greater want of ability, than of desire, to improve. I say ability to improve, because I believe the improvement of poor land without money is a very slow business; to a man in debt, it is unattainable.

There are in Virginia a great many rich men owning extensive tracts of land that yield them little or no revenue. Suppose such an one would lay off a tract into farms of one hundred and fifty acres; erect neat, cheap and convenient buildings, and offer them for rent on long leases, to substantial, moral men, to be cultivated upon particular systems, prescribed by the landlord.

By the purchase of a few good negro mechanics, the buildings could be erected very economically, the material being generally to be found on the spot, and it seems to me that tenants could be readily obtained on terms that would make the investment an excellent one.—Fifteen hundred acres so disposed of, might, by judicious restrictions in the leases, be converted into a splendid estate in twenty years. If it only paid six per cent on the improvements in the meantime, it would constitute a safe and capital investment. There are many good and substantial men in the country, who have capital enough to farm it advantageously, if they could only rent good land on fair terms, who are sure to fall through when they attempt, with their limited means, to purchase for themselves.

If these suggestions should excite the attention of those much better qualified to discuss all the questions appertaining to the art of agriculture, than one who has never been connected, except incidentally, with its pursuits, my object will have been attained.

Your obedient servant,

A Merchant.

Important to Ladies.—An English paper has the following card to all fair lovers of worsted work:—

"Half a pound of soft soap, half a pound of honey, one pint of English gin, mix all well together, and, with a sponge, clean the work with it, and then apply cold water in the same manner; dry with linen—the brightest colors will be uninjured."

☞Corns may be cured by binding them tight at night with a piece of spunge moistened in a solution of pearl ash. The corn may be brushed off in the morning, having been dissolved by the action of the caustic.

From the Baltimore American.

Messrs. Editors—The diffusion of intelligence on agriculture being one of the characteristics of your widely circulated and very valuable paper, as well as to convey the earliest commercial intelligence, has induced me to give to the farmer a few practical hints on seed wheat, and its preparation, as well as on the proper time for seeding, as elicited by a late article in your paper on the subject of preparing the seed to avoid smut. It has been abundantly proven in the western counties of this State, prepare the smut seed wheat as you may, that you seldom if ever fail to produce smut wheat.—The cause is the strong infection of the smut adhering to the sound grain; not that the smut vegetates: this is by no means the fact. It is only accounted for on the principle of poison being communicated in the animal creation, which applies with equal force to the vegetable kingdom. Aided by some practical knowledge, and a desire to give all the information possible on the subject of farming generally, I have been unremitting in my efforts to obtain from practical sources in this country and Europe all that is desirable on the subject.

It is a constant practice among the most successful farmers to change their seed frequently, say once in two or three years, taking care to obtain it from a different soil. The object attained by this is to retain the quality of the wheat.

Very few American Farmers, or rather wheat growers, are willing to apply the labor necessary to prepare the seed for sowing. This with the English, Irish and Scotch farmers, has become indispensable; their constant practice is to purify the seed by passing it through a strong brine, then roll it in slacked lime similar to rolling it in plaster; the safest way is not to let it lay in the brine more than one or two hours.—By this process, if the argument holds good that from impurities in the wheat smut proceeds, and the egg producing the fly is deposited on the grain, the cause for these will be all removed; you will have at least accomplished one grand object by the cleansing and rolling—the starting of the plant from the root a vigorous growth, which will go far to mature it early, and will be a preventive from fly and smut.

There is such a diversity of opinion as to the time of sowing wheat, that it is difficult to combat the different opinions. The object of fall sowing is evidently to give strength to the plant, so that on the opening of vegetation in the spring, the plant will take an early start. Early maturity of course follows, which at all times insures you a good crop of heavy wheat, provided the land is in good plight.

Having the fly to contend with in the autumn, at which time it is most destructive to the growing wheat, you will hardly take the risk of sowing too early, and if too late, the weak state of the plant in the spring will cause you to have the fly to contend with. Then taking the middle course of time is by all means the safest, say from the 1st to the 8th of October. By this time you will have had frosts that will be destructive to the insect, if on the surface. If attacked from the root, its progress will be retarded for want of heat.

It will not have escaped the recollection of the wheat grower in 1836, I think, when there was a total failure of the wheat crop in nearly all this country, then it was owing to early sowing, which luxuriated fairly, but was all cut down by the fly in the autumn. J. Meixsel.

Baltimore.

To Dry Cows intended for Fattening.—Take an ounce of powdered alum, boil it in two quarts of milk till it turns to whey; then boil in this whey a large handful of sage, till it is reduced to one quart; rub the cow's udder with a little of it, and give her the rest to drink. First milk her clean, and afterwards draw a little milk every second day, lest the udder become over charged. Repeat the dose and operation if necessary.—*Monk's Agr. Dictionary.*

From the Central New York Farmer.

CATTLE SHOW AND FAIR OF THE N. Y. STATE AGRICULTURAL SOCIETY.

ROCHESTER, September 19th, 1843.

We arrived in Rochester on Monday, and found her citizens spiritedly engaged in making the necessary arrangements for the Fair, which is to be held here to-morrow and next day, (Wednesday and Thursday,) and which promises to be one of the most brilliant exhibitions of the kind, which has ever been witnessed in the State. We intend to give a full report of the proceedings, and for the purpose of laying it before the readers of the Farmer at the earliest possible time, shall give the doings of each day separately, and forward to the Printer, so that the paper may be issued immediately after the close of the exhibition. To-day (Tuesday) has been devoted entirely to the reception and arrangement of articles for exhibition. Although many articles will doubtless be brought on to-morrow, there are enough already presented, to make the exhibition entirely creditable to the Society and to the farmers of New York. Of Ploughs there is a great variety and from every part of the State. We have noticed those from Mr. Chase, of Amsterdam, Mr. Avery, of Oxford, Tefft, of Amherst, Erie Co., Stanford and others, of Rochester, Miner, of Peekskill, Delano, of Mottville, Madison Co., Davis, of Waterloo, Bostwick, of New York, Burrall, of Geneva, Vanbrocken, of Niagara Co., and Hall, of Pennsylvania. Mr. Wilson, of Vernon, Oneida Co., has also arrived with a plough which is not yet on the ground. In this department there is a deep interest, and the manufacturers look for a fair and full trial. Of other implements there is a pretty good exhibition—such as Threshing Machines, Cultivators, Seed Sowers, Horse Rakes; and Mr. Burrall, of Geneva, has brought on a Clover Mill, which is, we believe, the only one on the ground. Last year, the exhibition of Straw Cutters was very great; but we have, to-day, seen only one on the ground, and that made in this city. In the line of domestic articles, we should judge, from the entries made, that the show would be respectable, while in fruits and flowers, it will fall far short of the last year's exhibition at Albany. A great proportion of the counties are represented by productions of female skill and industry, and many of the ladies have come on in person, to attend the Fair. Of stock, although many animals are entered, more will be brought on to-morrow morning, and although the show will not be large, yet Western New York will show some fine animals. There will be no animals from the counties east of Oneida, except a Bull from the herd of Mr. Crosby, of Albany Co.—In this we are disappointed, and can hardly excuse the breeders in the River Counties for neglecting to contribute something to the show.

The Show Yard is well fitted up, on a piece of dry ground about a mile from the city, and fenced so as to prevent ingress and egress, except at the gates. The arrangement of the pens, &c., is nearly the same as last year. The city is already full to overflowing, so that persons who arrived this evening, find considerable difficulty in obtaining rooms. What will be done with those who arrive to-morrow, we know not, but the citizens and Committee of Arrangements are making every exertion to accommodate all who may arrive. The train of cars from the west came crowded, while two heavy trains came from the east this evening—and yet of those who will be in attendance, not one half are yet here. To-morrow will show a greater number of persons than ever before collected in this beautiful city. The firm and tried friends of the Society are here—such men as Messrs. Wadsworth, Tucker, Van Bergen, Doct. Beekman, Sacket, Randall, and a host of others, whose names we might mention. From other States, are Mr. Jewet, of Vermont, Mr Ferguson, and other gentlemen, from Canada, &c.—Mr. Van Buren and Gov. Bouck came in the evening cars.

WEDNESDAY, September 20.

This has been one of the most interesting and brilliant days ever witnessed in New York.—The collection of strangers is estimated at full twenty thousand, and equals, if it does not exceed the attendance last year at Albany. A great number have arrived from different parts of the Union, among whom we notice Messrs. Merriam and Phelps, and several other gentlemen from Boston, Mr. Kirkland, Secretary of Hampshire, Franklin and Hampden Society in Massachusetts, besides several distinguished individuals, residents of our own State. Early in the morning, the foot and carriage way in every part of the city, were crowded, and before nine o'clock, State st., from Buffalo st., to the Show ground, a distance of more than a mile, presented one continued mass of persons crowding their way to the yard. The rush at the gates was so great as to prevent our entrance for a short time, and when we found ourselves inside the gates, the whole field of twelve acres was crowded with spectators. The interest does not seem to have abated in the least during the day, and all seemed highly delighted with the exhibition. Of stock the number was very great, and among them some splendid animals, although in point of quality, it is doubted whether this would compare with last year's show.—Messrs. Sherwood, Wadsworth, Remsen, Alexander, Allen, &c., are here with considerable herds, and a great number of individuals with one or more animals. The show of horses is decidedly superior to either of the previous ones, both in value and numbers, and we think in this respect, Western New York has done herself great credit. Of sheep, we saw but few in the pens, but these were of all breeds, and among them some fat sheep very superior. Mr. Frisbie, of Vernon, in our county, has some fine Saxons, although they have suffered much from the journey. We had supposed that among the many fine things of which Western New York boast, she must be famous for pigs, but to our astonishment, but very few of them have condescended to pay their respects to the citizens of Rochester, at this time. Some of these, however, are fine pigs and seemed to enjoy the occasion better than the gentlemen who had called to make their acquaintance, for most of them were quietly enjoying their repose, from which they were only aroused by a thump from the cane or foot of some member of the committee. If the admirers of beauty in swine will attend the Oneida County Fair, we will show them an exhibition far greater than that at the State Fair. The mechanics have, however, done themselves full justice, by bringing a great variety of implements of almost every description, and some of them got up in a superior style of workmanship. We thought the articles entered yesterday, were very numerous, but more have been brought on to-day, making a very great variety in all. Ploughs, Straw Cutters, Fanning Mills, Threshing Machines, Smut Machines, Harrows, Cultivators, with all the various articles used on the farm, and in the garden, are exhibited in great numbers. The Ladies on this occasion, as on all others of a public nature, have done their full share to interest the thousands of spectators. Almost every variety of articles of Ladies' manufacture, was presented, but we had very little opportunity of examining the specimens, as we were unwilling to submit long to the *pressure* to which we were subjected in the crowd.

Fruits, flowers, and vegetables were here in considerable quantities, and some of them were fine specimens, but the drought has been so severe in this region, as to prevent full justice being done to this department. A beautiful specimen of Grapes, presented by Capt. Mervine, of Utica, attracted our attention, and did not suffer in comparison with specimens raised in this region of fruit.—On the whole, we think the show a good one, and highly creditable to the Society and to the citizens of the State. A large amount of money has been received at the gate for admittance, (one shilling each for persons not members,) and a great number have entered their names as members of the Society, so that we should judge that the treasury would hold out pretty well. Although in consequence of the great number endeavoring to gain admittance, there was some confusion at the gates; the whole day has passed off without disorder, and all seem to be highly pleased with the doings. The most amusing incident we have seen was when Mr. Van Buren attempted to view the stock. The attention of the crowd seemed to be at once directed to the Ex-President, rather than the stock, and all at once the whole army seemed to be moving in the direction in which he was going. The crowd became so great that he was compelled to leave the yard and proceed to his rooms at the Eagle. This will perhaps be attributed by some, to his great popularity, but we could not see but the Whigs were fully up to the Locofocos, in the chase after the "Farmer of Kinderhook."

The Agricultural Supper, at the Rail Road Depot, has just adjourned. This was expected to be a great affair, and if the number of persons in attendance is to be taken as the criterion, it was so. We have already bestowed commendations upon the citizens of Western New York, but we must be permitted to say that the arrangements for this great festival were badly planned, or what is worse, poorly executed. A few minutes before seven o'clock, (the hour of admittance,) a dense crowd had gathered in front of the building, composed of persons having tickets and those having none, so that during the fifteen minutes which elapsed before the doors were opened, we were crowded almost to suffocation, and it was with the greatest difficulty that an entrance was gained after the doors were opened. Had a suitable police been in attendance, order and quiet might have reigned where all was confusion and disorder.

Of the supper, we shall say nothing, as eating was not so much the object as to hear the distinguished individuals who were expected to address the farmers on so important an occasion. Just as the eating was over, the eastern train of cars came puffing into the dining room, bringing a great number of passengers, and among them, Hon. Daniel Webster. The cheering as the cars entered, was almost deafening, and it was some time before order was restored. Speeches were made by the President of the Society, Mr. Wadsworth, Mr. Van Buren, Mr. Granger, Mr. Leland, Mr. Webster, Mr. Ferguson of Canada, and others, some of which were heard, but with the cheers, breaking down of seats and tables, and the crowd to get within hearing distance, not one half of those present were able to hear even a portion of the remarks. We are aware that in the great labor attendant upon the getting up of such a supper, it is very difficult to avoid confusion, but we do insist that there is no cause for the entire want of system and of order, which characterized the occasion of which we have been speaking.—We have seen here much, very much, of which, in common with every citizen of New York, we were justly proud, but we will not attempt to conceal the deep mortification to which we were subjected on account of the very discreditable manner in which the whole affair at the Depot passed off. None would welcome more cordially than ourselves the distinguished men of this and other States, to the farmers' ever hospitable board, but we hope for the credit of the State and of her noble Agricultural Society, that such proceedings will not again be repeated.

We give a sketch of the remarks at the table. The President of the Society, Mr. Wadsworth, made a brief address, alluding to the success which had attended the efforts of the Society. In the course of his remarks, he alluded to the election of a farmer Governor for the State of New York—saying that our Society should be proud that a farmer had been found worthy of being elected. He regretted the absence of Gov. Bouck, who was prevented by indisposition from being present. Mr. Wadsworth also alluded to many distinguished men of our country,

who had retired from the toils and bustle of political life, to the quiet and peaceful pursuits of agriculture, and among others he alluded to Ex-President Van Buren, who was present at the table, as an invited guest.

Mr. Van Buren being called upon, rose and expressed his gratitude for the respect which had been shown him—first to those who did him the honor to solicit his attendance, and next to the audience, for the kind and cordial feelings which had greeted his appearance among them.

He spoke highly of the exhibition which he had witnessed during the day—and although his expectations had been highly raised, the reality far exceeded his highest anticipations.

He alluded to his own experience for the two last years, which he had devoted to the cultivation of his farm, and which had proved to him the happiest years of his life. He gave an account of his experiments upon his farm, showing that he had profited by the experience of others, as his farm, which two years since did not produce a supply for his own use, the present season yielded him a surplus of eighty tons of hay. He closed with some very appropriate remarks in addition, and was loudly cheered as he sat down.

Judge Leland, of Steuben Co., followed with a few remarks, in which he spoke much in praise of the farmer, and concluded by giving as a sentiment—*Gov. Bouck.* It is a credit to the Farmers of New York, that they have *one* among them capable of filling the distinguished office of Governor of the State.

The Hon. Francis Granger, of Canandaigua, one of the favorite sons of Western New York was then called up.

Mr. Granger rose amidst loud applause. He commenced by saying that something probably was expected of him in behalf of Western New York, but he said it could hardly be necessary—for on looking around him he saw all Western New York there. He alluded to the emotions he felt on entering the cars to find by his side the man who *raised* the *first bushel* of wheat west of Cayuga Bridge. That man was Abner Barlow, of Ontario Co., who was present. Mr. Granger paid a glowing tribute to the pioneers of Western New York, and concluded with the following sentiment:

"*The Pioneers of Western New York.*—They descended from Pisgah to enjoy the promised land."

The Hon. Daniel Webster, was then announced by the President amid the most enthusiastic plaudits.

Mr. Webster remarked that he had made a very rapid journey of hundreds of miles to meet with the farmers of Western New York. He came to offer them the congratulation of a poor farmer of New England. He had devoted all the time he could spare to the cultivation of the soil, and endeavored to make up by application, what he was unable to do by study. He spoke of Agriculture generally, and of its effects upon society, and after a few remarks in relation to Western New York, and said that he intended to carry home with him for the benefit of New England, what he should learn here. He closed amidst the renewed cheers of the audience.

Mr. Ferguson, of Canada, next followed in some very playful remarks, and concluded with giving—

"*The President of the New York State Agricultural Society.*"

Mr. Wadsworth briefly responded, and was followed by the Mayor of Rochester.

THURSDAY, Sept. 21.

Another remarkable day has passed, and we hasten to record a brief account of its doings.—The Ploughing Match, that holiday of the farmer, which is always ushered in with the most pleasing emotions, and which more than any one thing contributes to improvement in the cultivation of the soil, has this day been held.—The streets leading to the ground were thronged for hours before the time of commencing the trial, and before 11 o'clock, at least five thousand persons were assembled to witness a trial of skill by thirty-eight ploughmen, who had with a zeal truly commendable, entered the lists. The interest taken by practical farmers in this part of the proceedings, exceeds every other part of the exhibition. The work was much of it well done, but we greatly mistake the skill of Oneida plowmen, if they cannot excel any work which we have seen to-day.—Let them challenge the State next fall, and we shall see who is the best plowmen.

At three o'clock in the afternoon, an immense concourse of people, estimated at 5000 at least, assembled on the ground of exhibition, and listened to a most admirable address from J. P. Beekman, Esq., of Columbia Co., one of the Vice Presidents of the Society. As the address will soon be published, we prefer giving it to our readers as delivered, rather than mar it by any sketch of our own.

It has been announced that Mr. Webster would address the audience after Mr. Beekman's address—but the President of the Society announced that Mr. Webster was so unwell, as to be unable to appear upon the ground.—Hon Ex. Gov. Seward being on the platform, was loudly called for, and responded to the call. He said, last year, he thought the farmers of Eastern New York the most unreasonable men he had ever known—in calling upon him, at four days notice, to supply the place of the most distinguished man and ablest Statesman not only of this, but of any other country, the Hon. Daniel Webster, of Massachusetts—but he was constrained to say, that the farmers of Western New York were still more unreasonable in calling upon him, without a moment's notice, to make a sacrifice of himself, and to fill the place again designated for the same distinguished gentleman.

He alluded very happily to agriculture, its importance, its tendency to peace and quiet—and showed in a few bold sketches, the superiority of the farmer, over the men of many fields of battle and carnage.

He alluded also to our farmer Governor, of Schoharie, and rejoiced most heartily to see him upon the ground, and pledged himself to stand by him in every effort to improve and advance the agriculture of the Empire State. He also alluded to the distinguished agriculturist, the Ex President Van Buren, of Lindenwold, the Hon. Daniel Webster, of Marshfield, and the Farmer of Ashland, the Hon H. Clay, and said where such men were united, the cause must go forward and finally prevail, however they might differ as to Banks and Tariffs, and matters of that sort, which though of importance in themselves, must all of them yield to this one great object, the imgrovement of the agriculture of our country. Gov. Seward was loudly applauded at the close of his address.

The Ex. President and Gov. Bouck, were both called for, but having left the ground some time previously, they were not heard, much to the regret of the large audience assembled.

The Reports of the several Committees were then read, and the premiums awarded.

DRYING FRUITS.

As this is the season for drying fruits, particularly apples, peaches, pears, and the like, a few directions for the successful performance of this highly useful operation, may not be altogether uninteresting to some of our readers.—The perfection of the process consists in taking ripe fruit whose flavor and body have come to full maturity, and then dry it sufficiently to prevent decomposition, without injury to any of its natural qualities. Peaches are too often gathered and dried before they are ripe; because it is less troublesome, and the product is much larger; although such fruit is little better than bits of dried sole leather. In order to dry fruit successfully, it is well to know something of its chemical nature. All fruit contains water in two distinct states. In one, water forms a part of, the other it constitutes by far the larger element in its juices. A gentle heat drives off a good portion of the latter by evaporation, without affecting the former in the slightest degree. If, however, the temperature is raised above 89 or 90 degrees, the organization of the fruit undergoes a change, and we obtain a product more or less altered, according to the intensity of the heat applied. In this way dried fruit is often seriously injured. It matters not whether fruit be dried by the warmth of the sun, or by artificial heat, provided the temperature is not raised too high when artificial heat is employed. In drying plums and some other fruits whole, it is advisable to make an incision into the rind to promote evaporation. In France, very acid fruits, after they are partly dried, are put into warm weak ley, until their surface becomes wrinkled, when they are washed clean and the process of drying completed. This is done to remove the excessive acidity of cherries, plums, and other acid fruits.

To preserve apples and other fruits fresh, it is advisable to put them up in tight cases, and in some dry material that will prevent their coming in contact, which makes the pressure of their weight apply to the whole surface, instead of to the small points of contact when apples are laid one on top of another.—*Buffalo Adv.*

THINGS THAT HAVE BEEN SEEN.—A writer in the Prairie Farmer has seen some curious things. We select the following:

I have seen farmers that went to the store oftener than they went to mill.

I have seen a farmer's wife take the last twenty bushels of wheat from the granary to purchase a new dress, when her husband at the same time had an execution standing against him.

I have seen farmers that could go twenty miles to a political meeting, but would not go five to an agricultural one.

I have seen farmers that had but little except "dog fence," but I could not see that they had better crops than those that had good rail or board fence.

I have seen farmers that burned their straw when threshing their grain in the fall, and go begging the same article before spring to keep their stock alive.

I have seen a farmer that travelled one hundred and four miles in the course of a year to use his neighbors grindstone, when two days' labor would purchase one that would last ten years.

I have seen young men that could pay ten dollars for a "spree," that would not pay one dollar for the Prairie Farmer.

I have seen a mother that called her child a "brat" in the cradle, and in two years the child called her a harder name.

I have seen a farmer in Illinois that cut down thrifty saplings in his door yard, and then set out others in their place that would require ten years growth ere they would present the same beautiful appearance.

I have seen farmers that would carry their produce fifty miles to market, when they could sell it at their own doors for the same price.

I have seen many farmers that would drink slough water and have the ague six months, when four days labor would dig a good well.

I have seen farmers' daughters that were "*very accomplished*" in every thing except carding, spinning, weaving, knitting, churning, making cheese, cooking, &c.

TO PREVENT WORMS AND BUGS FROM DESTROYING CABBAGES.—Mr. William Putnam, of Methuen, tells us he soaks his cabbage seed in brimstone and soot to keep the worms from the roots. He says that he has good cabbages when others have nothing but pork for the boiler. He says any one can raise the Early York, but it requires more attention to raise the Drumhead.

He recommends coal-dust for vines of all kinds—even cinders from the forge where sea-coal is burned. He spreads his coal-dust on the ground, and he says the squash bug and the yellow bug are so much offended with such proceedings that they fly away.—*Mass. Plowman.*

PLANTERS' CALENDAR FOR SEPTEMBER, OCTOBER AND NOVEMBER

The work of each is almost the same: picking cotton, ginning, pressing and hauling, with a continuance of the same; pick cotton clean, no trash at all admissible; go in for quality, rather than quantity—one bale of finely handled cotton *may* bring you $40, but a bale of trashy, dirty, cut and twist, will not over 25 or 28.—Don't attempt to gin over two bales a day on a 50 saw gin, let your mules take a steady, slow gait; quick work suited flush times—but, earnestly, rapid motion must break the fibre and cut it; whereas slow, regular and steady motion must pull it off the seed—the gin really only draws the staple off the seed. In pressing, put in 420 to 430 pounds in a bale, run screw well home, and cover every particle of cotton, sew sides *and ends* neatly, in the press if you can; put on not less than seven ropes, eight is more common; draw rope tight with a windlass attached to press, which many have not, and tie hard, so the rope will hold bale as near size as possible.

In September or October, you would do well to stop hands enough to plow in your Egyptian oats, rye and wheat; sow of oats 1½ to 2 bushels; rye, 1½ bushels; of wheat, 2 bushels per acre; sow grass seeds either of these two months. Your grain fields should be to themselves, so as to admit pasturing down if too luxuriant.

Rather than pick cotton while wet from rain, you would do better to continue your repairs, putting down woods pastures, and such like. It is not only very troublesome to dry cotton, but the dirt and leaf becomes attached and stains the cotton; and it not unfrequently happens, quantities of cotton are kept wet by cloudy, rainy weather in September, that sprouts the seed, and injures cotton materially. A few of these wet days can be employed in housing corn, gathering peas—corn, if wet; by scattering in gin house, they will dry. Save pumpkins for winter eating and feeding.

It is rather injurious to land, or rather it takes away from land an excellent good, but if scarce of provender, cut up pea vines, let them lie one day, then throw up into small, but high, heaps for one day more, then haul up and pack away; —a layer of oats, wheat or rye straw, a layer of lime, with a little salt sprinkled over the vines, and so on; give the Madam enough of this, and I guarantee she will give you fine, rich butter and milk in quantities. If a plow or two were started, all the better, though it were the best policy to get out cotton when weather is fine and season favorable.—*Southwestern Farmer.*

A LAST WORD ON WHEAT.

Let no one henceforth assert that the wheat crop is uncertain. There are soils and latitudes better adapted to its cultivation than others, as is the case with all other crops, but it is really as certain a crop as any other. Why should it not be, since its cultivation dates back to the commencement of man's history? In England there is no uncertainty in the wheat crop, except what is occasioned by the vicissitudes of the seasons, and so it is in this country with those that pursue the English mode of cultivating it. Why did Wm. C. Williams, in this neighborhood, reap thirty bushels to the acre this year, while the wheat of the majority of Kentucky cultivators was not worth the reaping at all? *He* sowed early, at the rate of three bushels of seed to the acre, upon a rich clover-lea, plowed 8 to 10 inches deep, well harrowed and rolled, and laid off into beds of 9 feet width, with deep water furrows. *They* sowed late, a bushel to an acre, upon worn-out land, and scratched the surface with the plow; so that much of the seed did not come up, much that came up was winter-killed, and what remained in the spring was smothered by grass and weeds. Since the laws of nature are invariable—since like effects are certain to follow like causes, who can doubt that Mr. Williams will always have a good wheat crop, or that his careless fellow citizens will always have bad ones, while both pursue their respective methods? If Mr. Williams produced on 20 acres 600 bushels of wheat, he would upon 100 acres of the same sort of land, with the same sort of treatment, have produced, inevitably, 3000 bushels; and if he produced thirty bushels of wheat an acre this year, will he not, under like circumstances, gather a similar harvest next year, and the next, and the next?

Let not the farmer neglect to soak his seed in strong brine and then roll it in lime. This is always done in England. Many believe it will prevent rust, although it seems to have failed in some instances in this region. At all events the washing will get out the bad wheat, and make the seed sprout and grow off more rapidly, and the salt and lime will act as manure.

Louisville Journal.

RHUBARB.

We take this opportunity of recommending to the favorable notice of our readers this delightful vegetable, which has been too long neglected by our horticulturists and farmers. For tarts and pies, there is nothing superior to it; besides we have it at a season of the year when other substances, for that purpose, are scarce and not to be had. It is far preferable for such culinary purposes to the goose-berry or currant, and it is so prolific in its growth that a dozen, or a dozen and a half of plants is sufficient for a family. There are two kinds, one called the *giant*, the leaf stalks of which we have seen as large round as a man's wrist, but they are not so early as the common kind, nor is the flavor as delicate. In addition to their value as a dessert, they are said to have powerful medicinal qualities, particularly in those distressing affections of the bowels, which so afflict our children, and carry them off by hundreds each summer. No head of a family who regards the health of his offspring, should be without some dozen of plants in his garden.

The time of sowing the seed is in November, and the following directions for its culture, we copy from Thorburn's catalogue.

"Sow in a rich, dry, sandy loam, about three-fourths of an inch deep, as early in the spring as possible, (if done in November they will vegetate in spring with more certainty;) when the younger plants appear, keep them free from weeds; if the weather be dry, water them frequently, though with little at a time; and be very careful to protect them from the midday sun, till they get tolerably strong, for if exposed fully to it during their infant state, few will escape destruction. A wide board placed sidewise on the south side, projecting over the plants a little, will serve this purpose effectually, without depriving them of the benefit of the circulating air. The first season is their critical period; having survived that, they have nothing to fear. In November, the leaves having decayed, cover the crowns of the plants two inches deep with earth from the intervals. In April, strip off the covering till you see the tops of the plants; give all the ground a slight digging; dress it neatly, keep the beds well hoed, and always free from weeds. It is much better to propagate by slips from the old roots in the spring months. The seed start very readily if sown in the autumn, but vegetates rather slowly in the spring. The flower stalks should never be suffered to run to flower, but taken off as soon as they arise."

It is the stem of the leaf from which the tarts are made, and in taking the stalks, remove a little earth and bend down the leaf you would remove, slip it off from the crown, without breaking or using the knife. The stalks are fit to use when the leaf is half expanded; but a larger produce is obtained by letting them remain till in full expansion.

As some of our readers may not be acquainted with the manner of cooking this vegetable, we will give the following, to the goodness of which we can testify.

Wipe the stalks with a dry cloth; peel and cut them into small pieces; put them into a stew-pan, with sufficient water to cover them, and when scalding hot, drain off the water, put in sufficient sugar to sweeten, and stew them gently for a few moments; stir in some butter, and such kind of spice as is agreeable; cover the plate with paste, and put in the preparation, and cover with paste as for an apple pie, and and bake in the usual manner.

Another method is to "peel and wash one or two dozen sticks of Rhubarb; put them in a stew-pan with the peel of a lemon, a bit of cinnamon, two cloves, and as much moist sugar as will sweeten it, set it over a fire, and reduce it to a marmalade—pass it through a hair sieve, then add the peel of a lemon, and half a nutmeg grated, a quarter of a pound of good butter, and the yolks of four eggs, and one white, and mix all well together; line a pie dish that will just contain it, with a good puff paste, put the mixture in and bake half an hour.

Central N. Y. Farmer.

WATERY POTATOES.

Watery potatoes, or those in which carbon does not abound, are always deficient in nutritive qualities, which depend on the presence of carbon. The latter cannot exist in just proportion independently of proper light and heat. Hence potatoes grown in an orchard are never good; the light and oxygen which should act upon them, are intercepted by the leaves of the various fruit trees; the deleterious portion of the carbon, which the light and oxygen would have carried off, mixes with the watery particles of the vegetable, and it becomes not only deficient in nutriment, but absolutely unwholesome.

TO MAKE YEAST.

Take two middling sized boiled potatoes, mash and add a pint of boiling water and two tablespoonsful of brown sugar. One pint of hot water should be applied to every half pint of the compound. Hot water is better in warm weather. This yeast being made without flour, will keep longer, and is said to be much better than any other.

TO PRESERVE HAMS FROM FLIES.

For several years we have preserved our hams in charcoal; we lay the hams down in a barrel, pounding the charcoal, and placing it between the hams. The meat keeps entirely sweet. Flies never touch the meat.

CIRCLING.

Experience and reflection have convinced us that to circle our lands to a perfect level, is not the most advantageous way of preventing washing. It may do for light rains, but when such torrents pour down as we sometimes have, the circling on this plan is rather an injury than an improvement---every row gets full of standing water---some part of the bed will be a little lower than the balance---the water will begin to run over at that part of the bed immediately below; it soon wears through that, and thus makes a wide torrent, carrying away whole acres of the loose soil, or working out a gully not easily again filled up. A better plan, we are now convinced, is that followed in Virginia and other States, of grading the rows, not to a perfect level, but to such a slope as will pass off the water in a current sufficient to enable each row to carry off its water without overflowing, yet not so rapid as to wash. At the ends of the rows the water may be either passed through the fence, out of the field from each row separately, or collected in a ditch, and passed off together.

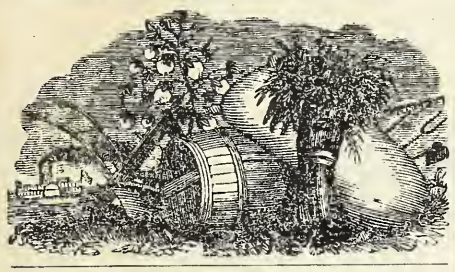
Southern Agriculturist.

ASPARAGUS BEDS.—Those who wish early and large asparagus in the Spring, will find it necessary to pay some attention to their beds in the Fall.

It is best not to permit grass or weeds to grow on the bed during the summer, but very few gardeners are careful to prevent this. It is important however, early in the Fall, to clear the bed entirely of the old asparagus, weeds, grass, &c. (Some writers recommend that these be burned as they stand on the bed,) and then cover the whole surface with a thick coat of stable or cow-

pen manure. Cotton seed is said to be still better. The winter rains passing through this coat of manure, carries much of its fertilizing properties down to the roots of the asparagus, while at the same time, it protects the bed in a great degree from cold, and thus tends to hasten forward the shoots in the Spring. Early in the Spring, this coat of manure should be carefully scraped off, and salt sown freely over the bed, say a half bushel to thirty feet square.

We have tried this method two years, and can speak confidently of its results.—*Co. Planter.*



WEDNESDAY, OCTOBER 11, 1843.

Back Numbers.—All new subscribers to the 'Southern Cultivator" can be supplied with the back numbers.

AGRICULTURAL FAIR.

With the hope that it may excite among Southern planters a spirit of emulation, we have transferred to our columns an account of the great State Agricultural Fair of New York, which we commend to the attention of our readers. We should have been pleased to have given some of the speeches of the distinguished guests, but our limits will not permit, and we must, therefore, forego that pleasure.

We have from, time to time, briefly urged upon the consideration of our readers, the importance of Agricultural Societies, and the immense benefits which they confer upon the country, both in the improvement of the system of agriculture, and the consequent increased production of labor, but we know not that we could enforce these truths by any argument so powerful, as the spirited sketch which we copy of this fair. That improvements in agriculture, like every other department of trade or business, can be advanced more rapidly by an association of men, uniting and concentrating the force and power of their intellects and experience to the attainment of the great end, it seems to our mind, is a truth so palpable as not to require argument. It is, therefore, strange, passing strange, to us, that while men unite and form associations and clubs for the accomplishment of objects of much less importance to the well being of society than the improvement in agriculture, they should seem so reluctant to enter into an association for the attainment of an object of such paramount importance to every class of society. There is, there can be, no good and sufficient reason offered for such a positive neglect of duty. It cannot be supposed, by any rational man, that the great objects of creation are answered, if we sit down quietly and attempt no improvement of the age in which we live, in whatever department it may be our lot to labor. How, then, shall we answer to ourselves, and particularly to those who come after us, if we permit, by our remissness, the important science of agriculture to retrogade, while the march of every thing else is onward? We cannot excuse ourselves for such an omission of duty—a duty alike prompted by our own interests as the high behests of creation. But we will not now enlarge upon this subject, for, as the labors of an editor have been aptly compared to a horse in a gin, we shall continue to urge it, until we succeed in arousing among our planters a spirit for improvement, or abandon the cause in hopeless despair. It is, indeed, a noble cause—one worthy to engage the highest talents in the land—and should excite to a common effort every philanthropist.

The American Agriculturist's Almanac for 1844.—We are indebted for a copy of this work, to Mr. A. B. Allen, editor of the American Agriculturist, which is thus noticed by the American Farmer:—"Besides the astronomical matter usually found in Almanacs, this contains Northern and Southern Calenders for the farmer, planter and gardener; an interesting essay on lightning rods, a cut of a permanent fixture for stacking grain, such as is used in England, and a very interesting description thereof; interesting papers on several varieties of sheep, illustrated by engravings so true to life that any one who may have seen them could identify the live animals at any distance of time; a paper on hoeing crops in dry weather, together with an account of the Dorking fowls, which is also illustrated by a very spirited cut, representing a rooster proudly strutting between a brace of hens. The work is highly creditable to the enterprise and talents of its editor; but why need we say this, having already told the reader that it is by A. B. Allen."

From the Columbia (S. C.) Planter.

Mr. Editor.—In the various essays on planting, manuring, and working short cotton, we find nothing relative to its preparation for market; to make a great many bales seems to be the great desideratum, without regard to price, except as a general market value. This is certainly wrong. The advantages of good seeds, and an improved soil, may not be of so much pecuniary importance as the manner in which cotton is machined and put up for sale. An imperfect gin, or ignorance of its operation, may diminish one's income more than "rust," or the "nocturnal gale"—may take from the energetic and persevering planter all the just reward of his extra industry, and leave him at last with not more dollars in his pocket, after his crop is sold, than his less industrious, but more careful neighbor.

The present low price of cotton is mainly owing to the quantity made. So long as the supply was limited, the speculator and manufacturer regulated the price; the one holding heavy stocks on hand, without fear of depreciation, the other "milling" it ahead of the immediate demand, certain of an ultimate sale, at a remunerating price.

It is not so now. The speculator fears the increasing production. The manufacturer, from the supply being greater than the demand for light cottoni, is forced to consume his stock in the heaviest articles. Bagging, rope, negro-cloth—all consuming pounds to the yard, instead of a *pound* making *yards*. This fact will go far towards making the quality of the staple, and its preparation for market, a matter of greater importance. The smallest possible difference in the "sample," may condemn a man's crop to be worked up in a less estimated and less priced fabric, and cause a *speculating* difference in favor of the buyer, of almost incalculable amount; and in proof of the paradox, (if so it is,) I refer you to any merchant, who will tell you that "coarse articles bear the best profit." Pray, at whose cost is the profit made? the producer, certainly, and in two ways: first, sir, to you I say, you have lost more by carelessness than you have made by hard work, and it will bear demonstration. By *hard work* you have made an addition to your crop of one hundred pounds per acre. By negligence you have lost one cent in the pound of your crop. Suppose you raise 600 lbs. per acre in the seed—

600 lbs nett (at 33 lbs. per. 100 of seeed,) 198 lbs. at 6 cents, - - -	$10 88
Not manured, 500 lbs. nett (at 33 lbs. per. 100 of seed,) 165 lbs. at 7 cents, -	11 55
In favor of carefulness, - - -	57

And, sir, when we take into consideration the time lost ginning, packing, additional expense of bagging, rope, freight, hauling, &c., the advantage in favor of the careful man over the pushing, but careless planter, is increased.

Farming, at best, is a laborious business; yet the soil, grateful for the attention paid it, *pays* well for the labor; and when every branch of farming is pushed, and carefully attended to, although the land may be poor, the owner will "do well." I read a sentiment under the signature of "Farmington," that deserves the consideration of all who have poor land, and should be well examined by those who have rich soils. He says "he has rarely seen planters improve their condition fastest on rich soils, but rather on the poor and unproductive." The observation is true, and the cause so plain, as not to need a reason. And, Mr. Editor, unless you can convince your readers that if they do not get out their cotton neat and clean, have good gins and machinery, as well as rich land, they will contrive to "live as their fathers."

At some future time, I may scribble a notion or so about the *modus operandi* of ginning, and describe the gin, and machinery to run it. With this threat, and the wish that some man may be profited by my cogitations, I remain,

Your obedient servant,

Darlington.

From the Temperance Advocate.

TOPPING COTTON.

Mr. Editor—Allow me a small place in your worthy agricultural Advocate, to submit to your readers facts, which have come under my own observation, as to the utility of topping cotton. The practice of topping cotton has been thoroughly investigated by me, and I have found that cotton topped from the first to the tenth of August, will make about one fifth more than it would if left in a natural state. It has been suggested by some of the planters to top from the twentieth to the last of July, and experiments have been made on the present growing crop as to the utility of this practice.

I have found by topping cotton it will prevent it in a great degree from shedding its offers; this I have noticed this season, as it has been very wet with us. Cotton has generally shed its offers in the fields of my neighbors who have neglected the topping of it.

Now, I would say to those planters who have not as yet adopted the plan of topping cotton, to try it for one year as an experiment, and I feel convinced they will follow it afterwards.

O Pix.

Darlington, Aug. 20, 1843.

"If common salt be put into water, when washing cabbages or greens preparatory to cooking them, the snails, slugs, worms, &c., will come out and sink to the bottom, so that they need not be boiled with the vegetables. It is impossible to wash them out, except cabbages be taken to pieces, and people generally like to have the vegetables served up whole.

THE FARMER'S LIFE.

I love the farmer's quiet life—
His peaceful home, devoid of strife,
With gay contentment bless'd.
I love the virtues of his heart,
Which peace, and joy, and love impart
Around his tranquil rest.

I love the bloomy hills and dales,
Their healthful winds, their odorous gales,
Untainted with disease:—
I love the tales, and legends old,
By white-haired sires at twilight told,
'Mid scenes of shadowy ease.

I love the labor and the toil,
Which clothe with beauty Freedom's soil,
Where tyrant never trod!
And when each task from turmoil free,
Great God, is sanctified by thee,
And consecrates the soil.

I love the scenes of social mirth,
Which brighten around his evening hearth,
With joy unmix'd, replete;—
Where friendship's smile, and love's sly leer,
Are seen thro' joy's transparent tear,
And true friends only meet.

I love whate'er the season bring—
The flowers that blush—the birds that sing—
Eve's low Eolean breeze;—
The vernal smiles—the summer's charms,—
The autumn's fruits—and winter's storms,
All charm in their degree.

HONESTY.—That "honesty is the best policy," was illustrated some years since under the following circumstances, related by the Rochester Democrat. A lad was proceeding to an uncle's to petition him for aid for his sick mother and her children, when he found a wallet containing fifty dollars. The aid was refused, and the distressed family was pinched with want. The boy revealed his fortune to his mother, but expressed a doubt about using any portion of the money. His mother confirmed his good resolution—the pocket book was advertised, and the owner found. Being a man of wealth, and uniting with that a generous heart, upon learning the condition of the family, he presented the fifty dollars to the sick woman, and took the boy into his service, and he is now one of the most successful merchants in the State of Ohio.—Honesty always brings its reward—to the mind, if not to the pocket.

SOWING WHEAT.

1. *Time of Sowing.*—Nine times out of ten wheat sown early, say by the last of September, or not later than the middle of October, is better than the late sowing. When sown early, the roots have time to grow deep into the earth, and the plants are in little or no danger of being frozen out in the winter. May wheat may be sown a little later, but other varieties sown late will not only be apt to freeze out, but ten chances to one if the rust does not destroy it before ripening.

2. *Preparation of Land.*—Clay soil, with a good coat of vegetable or animal deposits is best suited to the growth of wheat, and the land should be broken deep, then sow from a bushel to a bushel and a half to the acre, in proportion to the strength of the land, and plow it in lightly. Some good farmers finish seeding, by harrowing or brushing and rolling, but if the land is tolerably smooth, the plowing is all sufficient, and in some cases, best.

3. *Preparation of Seed.*—Wheat should be washed before sowing and all defective grains separated, and there are many solutions in which farmers recommend the wheat to be soaked to prevent smut, and other diseases, but as our experience has demonstrated nothing satisfactory on this subject, we have, at present, nothing to recommend.

Good seed, good preparation of land, strong soil, and careful putting in at the proper season, will insure a good crop—nothing else will.

Tenn. Agriculturist.

The Rev. Mr. Richardson, of Hingham, has given renewed energy to a decaying apple tree, nearly 200 years old, by raising a bank of earth, five or six feet high, around the trunk.

AUGUSTA MARKET.

Cotton—The receipts of Cotton are now getting on our usual fall scale. The accounts per the Acadia has caused a decline in prices of at least half a cent per pound on all qualities.—We quote 6½ @ 8 cents as extremes of the market.

[We refer to the quotations below for the value of the different articles of groceries required by our planters.]

Money—Central Bank notes 8 @ 10 ℔ cent discount. State 6 ℔ Bonds 72 @ 75.

AUGUSTA PRICES CURRENT.

BAGGING, Hemp	yd.	16	@	20
Tow	"	15	@	18
BALE ROPE	lb.	6	@	10
BACON, Hog Round	"	5	@	6½
Hams	"	8	@	10
Shoulders	"	5	@	7
Sides	"	6	@	8
COFFEE, Green prime Cuba,	"	9	@	10
Ordinary to Good	"	7	@	9
St. Domingo	"	7	@	9
Rio	"	9	@	10
Laguira	"	9	@	10
Porto Rico	"	9	@	10
Java	"	11	@	14
CORN	bush.	37½	@	50
FLOUR, Canal	bbl.	5 75	@	6 50
Baltimore	"	none.		
Western	"	none.		
Country	"	4 00	@	5 50
FEATHERS	lb.	23	@	25
IRON, Russia	cwt.	5 00	@	5 50
Swedes, assorted	"	4 50	@	5 00
Hoop	"	7 00	@	8 00
Sheet	"	7 00	@	8 00
Nail Rods	"	7 00	@	8 00
LEATHER, Sole	lb.	23	@	28
Upper	side	1 50	@	2 00
Calf Skins	doz.	18 00	@	36 00
MOLASSES, N. Orleans	gal.	31	@	35
Havana	"	22	@	28
NAILS	lb.	5½	@	7
OATS	bush.	37½	@	50
PEAS	"	40	@	50
SUGAR, New Orleans	lb.	6	@	9½
Havana, white	"	11	@	12
" brown	"	7	@	8
Muscovado	"	7	@	9
St. Croix	"	8	@	11
Porto Rico	"	7	@	9
Lump	"	14	@	16
Loaf	"	15	@	20
Double Refined	"	12	@	13
SALT, Liverpool ground	bush.	50	@	60
" "	sack	1 75	@	2 00
STEEL, German	lb.	15	@	16
Blistered	"	8	@	12½
TWINE	"	20	@	25
TEA, Behea	"	50	@	75
Souchong	"	60	@	75
Hyson	"	80	@	1 25
Gunpowder	"	1 00	@	1 25

CONTENTS OF THIS NUMBER.

	PAGE
Subsoiling and Subsoil Plow	161
Rust in Cotton	162
Proper dispositinn of Farming Capital; Important to Ladies; Preparation of Seed Wheat	163
N. Y. Agricultural Fair	164
Drying Fruit; Things that have been seen; To Prevent Worms Destroying Cabbage	165
Planter's Calender; A Last Word on Wheat; Rheubarb; Recipes; Circling; Asparagus Beds	166
Agricultural Fair; American Agricultural Almanac; Preparing Cotton for Market; Topping Cotton	167
The Farmer's Life; Honesty; Sowing Wheat	168

GARDEN AND FIELD SEED.

A GENERAL assortment of fresh and genuine GARDEN and FIELD SEED, among which are the following:

Red and White Clover,
Blue and Green Grass,
Rye and Orchard do.,
Timothy and Herds do.,
Millet and Lucerne do.,
Seed Corn of every valuable variety,
Seed Wheat,
Buckwheat and Potato Oats,

Kept constantly on hand by the subscriber, all of which are offered for sale at very moderate prices. All orders, by mail or otherwise, executed with neatness and despatch.

WM. HAINES, JR.,
No. 232 Broad street, Augusta, Ga.
August 30. 18-tf

TURNEP SEED.

A SUPPLY of the following varieties of fresh TURNEP SEED just received, viz:

Yellow Sweedish or Ruta Baga, very fine for stock,
Large Globe Turnep, } Fine
" White Flat do. } for
" Hanover or White Ruta Baga do } table
" Norfolk do. } use.

For sale in quantities to suit purchasers, by
Aug. 30 18-tf WM. HAINES, JR.

BOMMER'S PATENT MANURE.

THE undersigned is the Agent of Messrs. Abbett & Co., for vending rights to individuals for making and using the above named Manure. By reference to the following advertisement of Messrs. Abbett & Co., the prices may be ascertained. All orders addressed to me, *post paid*, at Sparta, Ga., will receive prompt attention.
Aug. 30. 18-tf R. S. HARDWICK.

THE BOMMER MANURE METHOD,

WHICH teaches how to make vegetable manure without the aid of live stock, in from 15 to 30 days, by a course of humid fermentation set into action at a cost of from 50 cts to $4.

And also to make Compost *in a few days.* And how to make a rich fertilizing liquid called "purin," having all the strength without the acrid qualities of urine.

With the view of graduating the cost to the quantity of land upon which it may be desired to use the method, the following scale of prices has been adopted, viz:

For Gardens of any extent $5
Farms up to 100 acres 10
" from 100 to 200 acres 15
" " 200 to 300 " 18
" " 300 to 400 " 20
" over 400 acres in any one farm 25

By the remittance of the sum here specified, a copy of the method will be sent by mail or in any other mode proposed by the purchaser.

All letters of inquiry must be post paid.
ABBETT & CO., Baltimore,
Proprietors of the patent right for the Southern and Western States. aug 16

THE SOUTHERN CULTIVATOR

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J. W. & W. S. JONES,

And will be issued every other Wednesday, at ONE DOLLAR a year, INVARIABLY IN ADVANCE. The CASH SYSTEM will be rigidly adhered to, and in no case will the paper be sent unless the money accompanies the order.

ADVERTISEMENTS pertaining to agriculture will be inserted for ONE DOLLAR for every square of TWELVE lines, or less, for the first insertion, and SEVENTY-FIVE CENTS per square for each continuance.

☞POST MASTERS are authorized to receive and forward money free of postage.

☞ALL COMMUNICATIONS MUST BE POST PAID

SOUTHERN CULTIVATOR.

VOL. I. AUGUSTA, GA., OCTOBER 25, 1843. No. 22.

PRIZE ESSAY.

THE PREPARATION AND USE OF MANURES.

BY WILLIS GAYLORD,

(Continued from page 147.)

USE OE PEAT OR SWAMP MUCK.

According to Mr. Colman, in his Fourth Report, two-thirds of the manure used on the extensive garden and farm of Mr. Cushing, near Boston, is made from meadow muck or peat. The compost, for top dressing meadow and grass lands, is made by taking the muck from the pit in August or September, where it lies to tae next year. The compost heap is then made on some convenient place, by spreading a layer of muck eight inches thick; on the muck four inches of ashes; then another layer of muck, and so on for five layers, making a pile five feet high, in the form of a ridge. This lies through the winter, is opened and mixed in the spring, and the next fall is spread on the land. The compost for plowed lands is made of two-thirds muck and one-third manure. Fresh manure, or that which has not fermented, is always used, and care is taken not to put in so much muck as to prevent the compost's heating. The fermentation of the manure decomposes the muck rapidly, and when this is done, the compost is fit for the land. Horse manure or unslacked lime, accelerates the fermentation—colder manure retards it. It is the opinion of Mr. Cushing and his gardener, that muck for mixing with cow dung, or for putting in hog styes, should be dug from the swamp six months before using, as the action of the atmosphere facilitates the change necessary. Muck, without this preparatory fermentation, they consider of little importance as a manure.

POND MUD.

Pond mud, although not as rich in vegetable matter or humus as swamp muck or peat, is still one of the most valuable of fertilizers. The quantity of earthy matters it contains, is rather an advantage than otherwise, when applied to light or sandy soils, and will rarely be found injurious on any. As a manure, the action of pond mud is more immediate than that of unfermented muck, owing to the much greater proportion of salts and silicates it contains. It is astonishing what quantities of this manure are lying worse than useless in the thousands of mill ponds in our country. In the winter of 1839-40, Mr. Whalen of Saratoga county, drew from a pond on the Kayaderosseras creek, 1,000 loads of pond muck, and put it on a field of 17 acres, soil light and sandy, or gravelly, and reduced by *skinning* until it would produce nothing but sorrel and mullein. This field, planted to corn, gave him 850 bushels. The extra product from the use of this manure, he estimated at twenty bushels per acre. In the winter of 1840-41, he took from the same pond 700 loads, and applied it to two other fields, and with similar results. Mr. Whalen has also, at different times, drawn 800 loads from an ash swale, and found it to nearly or quite equal in its effect on vegetation, the pond mud. After the corn, Mr. Whalen has uniformly grown oats; and on these worn out lands, where he formerly would have lost his seed oats, as well as the grass seeds used, he has been successful, both taking well where the mud or muck had been used. For heavy loams of clay, Mr. Whalen is of the opinion that a mixture of lime or yard manure, with the muck or mud, would be indispensable.—This mixture, the experience of Mr. Clark, of Northampton, and others, shows, is well effected by placing the muck in the cattle yards or pig styes, to be incorporated with the manures by the feet or noses of the animals, and to act as absorbents of the urine and soluble matters that are too frequently lost.

NIGHT SOIL.

Night soil, or the contents of privies, is one of the most powerful and valuable of manures; but prejudices, combined with the difficulties formerly attending its use, have prevented much attention to it in England or the United States, until within a few years. In consequence, a substance of the greatest importance to the farmer has been regarded as a nuisance, and, in the vicinity of large cities, has truly been so. Now, since science has taught the mode of preparing it for use, its use is becoming general, and its value fully appreciated. According to the analysis of manures, made by Boussingault and by Dr. Dana, there is no manure ordinarily accessible to the farmer so rich in the carbonates or salts of ammonia as this. This will be seen by comparing it with horse dung, the value of which is well understood.

	Horse Manure.	Night Soil.
Geine	27.	23.
Salts	.96	1.2
Carbonate of ammonia	3.24	15.32

HOG DUNG.

The dung of the fattening hog approaches night soil in value, more nearly than any other; indeed, Mr. Dana supposes that for all the purposes of analysis, these may be arranged under one head. In practical use, Von Thaer, on the Prussian government farm, determined by experiment its comparative value as follows: If a soil without manure, would yield three bushels of produce for one sown, manured with different substances the result was,

Without manure	3	for 1	sown.
With cow dung	7	" 1	"
With horse dung	10	" 1	"
With night soil	14	" 1	"

COMPARATIVE VALUE OF NIGHT SOIL.

In some experiments made by Arthur Young, and detailed in the Annals of Agriculture, the effect of this manure on wheat was as follows:

Simple soil, per acre		12½ bush.
Bushels of night soil	320	37½ "
" "	240	32½ "
" "	160	31½ "
Cubic y'ds of farm yard compost	60	25 "
" " " "	30	23¾ "
30 do and 1 cubic yard of chalk		25 "

Applied to potatoes, the results were not less decisive:

Simple soil produced per acre		120 bush.
Night soil, 10 wagon loads	600	"
Bones 10 "	650	"
Hog dung, 60 1 horse cart loads	480	"
Yard compost, 60 " "	300	"

POUDRETTE.

The most common method of using night soil, or at least that in which it is most portable and least offensive, is to convert it into poudrette. This is done to the best advantage in large manufactories; and hence they are usually established in the vicinity of large cities, where the original article is easily obtained. Different processes are adopted, but the most common is to slowly dry the night soil in pans, having previously mixed it with plaster or ground peat.—The object in adding plaster or peat, is to prevent the escape of ammonia, on which the value of the manure is mainly depending. The dried mass is then pulverized—is perfectly inoderous, resembles a dry brownish powder, and may be use broadcast or in drills. In Paris, a powerful manure is made, also called poudrette, by boiling the offals of the slaughter-houses into a thick soup, making this into a stiff paste by stirring in cold ashes, then drying and grinding.

URATE.

Urate is a manure formed from a compound of urine, sand and plaster of Paris. In Paris where the manufacture is most perfect the gypsum is burnt previous to using. The value of the urates, as a manure, will be better understood from the annexed table.

Water	65
Urea	5
Bone dust	5
Sal ammoniac and muriate of potash	15
Sulphate of potash	6
Carbonate of potash and ammonia	5
	100

From this, it will be seen that urate abounds in those substances most necessary to give fertility to soils. Dr. Dana remarks that a cord of loam, saturated with urine, is equal to a cord of the best rotted dung; and in some experiments made by the French Royal Society of Agriculture, which may be found detailed in the *Dictionaire d' Agriculture Pratique, Paris*, 1828, for the purpose of comparing it with night soil, pigeon's dung, &c., known to be very effective, the result was in favor of the urate. When mixed with dried night soil or poudrette, its effect on various crops was very great. From the experiments there instituted, it appeared that urate alone acted most favorably in moist seasons. It must be remembered, however, that night soil, when properly prepared, retains all the urine, or rather its fertilizing qualities; and the fact that urine is of itself so valuable a manure, should put the farmers on their guard against suffering it to be lost from their stables and yards, as is usually done.

USE OF NIGHT SOIL.

Where the farmer is so situated that no poudrette manufactsries are within his reach, he will find that by making it into a compost with swamp muck, ashes, peat or gypsum, he will have a manure that may be easily applied, and which will possess great fertilizing powers.—The Chinese have long been celebrated for the extensive use of night soil. Their method is to make it into cakes with a rich marl, which, when dried in the sun, constitute a regular article of traffic, almost a legal tender. The Flemings were the first of the Europeans to make a common use of night soil as a manure, and hence its name of Flemish manure. There it is applied directly, and without preparation, to any crop for which manure is wanted: and the superiority of Flemish agriculture, and the great fertility of their soils, may be, in a great mea-

sure, attributed to their careful saving and use of matters which others have been most anxious to be freed from. In Spain, the celebrated asparagus of Saragossa is grown on beds of loose gravel and sand, but a little above the flow of the tide; but these beds are heavily manured, after the cutting of the season is closed, with fresh night soil dug in, and thus their fertility is sustained, and the unrivaled character of the Saragossa asparagus maintained.

BONES.

Bones, ground or crushed, form another powertul manure; and although but little used as yet in this country, there are some indications, such as the erection of mills for crushing them, that their use will soon become extensive, and our farmers be saved the mortifying spectacle, so long witnessed here, of seeing ship loads of bones exported to Europe, used by farmers there, and returned to us in the products of the soil. Col. St. Leger of Wormsworth, was the first to introduce bone manuring into England, in 1775; but it was many years before their value was fully understood; and it was only in connection with the turnip culture, that they came into general use. The manner in which bones acts as manures, and their value, will be best seen by a statement of their constituents. The bones of the ox, according to Berzelius, contain in 100 parts:

Cartilage	33.3
Phosphate of lime	55.35
Fluate of lime	3.
Carbonate of lime	3.85
Phosphate of magnesia	2.05
Soda, with a little common salt	2.45
	100.

The analysis of Fourcroy and Vanquelin, gives:

Gelatine and oil	51.
Phosphate of lime	37.7
Carbonate of lime	10.
Phosphate of magnesia	1.3
	100.

Johnson, in his lately published work on Fertilizers, says: "Dry bones contain about two-thirds their weight of earthy matter, the other third chiefly of animal matter, resembling glue. Of the earthy matter, five sixths consists of phosphate of lime and magnesia. A ton of bone dust, contains of

Animal matter, about	746 lbs.
Phosphate of lime, &c	1,245 lbs.
Carbonate of lime, &c	249 lbs.

Bones, however, vary somewhat in their constituents, some containing more of the earthy, and others more of the animal parts; take those of the calf and the elk for examples, to which the teeth of the horse are added:

	Phos'te of lime.	Car'te of lime.	An'al matter.
Calf	54.		49.
Elk	90.	1	9
Teeth	85.5	15.5	

USE OF BONES.

It is evident then, that bones abound in matters capable of producing ammonia. Dr. Dana estimates its power in this respect to be equal to 8 or 10 times that of cow dung, while, if the salts are regarded, 100 lbs. of bones contain nearly 66 times as much as the same quantity of cow dung. Experience proves that the power of aiding crops, between dung and bones, is about in the proportion of the constituents named. It is evident that much of value of bones, as generally practiced, has but little effect in extracting the gelatine; and does not remove even all the fat or oil. Under high pressure as in Papius's digester, the separation of the animal from the earthy matter is complete. The finer bones can be crushed or ground, the better or quicker will their influence be felt; and boilers, by removing the exterior cartilage and fat, renders the crushing more perfect. It is owing to this cause, undoubtedly, that many of the English agriculturists prefer dry to fresh bones; as the dust made from the former, is more suitable for sowing or drilling with seeds, than that of the latter. Bone dust is the most efficient on light and dry soils. It has been found also very useful on limestone soils and light loams; but on heavy clay or wet soils, this manure does little or no good. Bone dust is one of the most efficient manures on clover, particularly the white clover, exceeding gypsum in its effects on this plant. This is accounted for by the fact, that white clover abounds in phosphate of lime; and the phosphates of bones supply it in abundance. Although principally employed as a manure for turnips, in consequence of their importance in a rotation of crops for the animals of the farm, particularly sheep, it is considered by many farmers quite as useful, employed as a manure for potatoes as it is for turnips. Bones are found to be more valuable, if subjected to a partial fermentation before being applied to the crops. If mixed with five or six times their weight of vegetable mold or fine rich earth, and turned over for several times for a few weeks before using, the value is much increased.—Since the general use of bones has been introduced into England, vast quantities are gathered and imported from all parts of the world. As an instance of this traffic, it may be mentioned that at Hull alone, in 1815, 8,000 tones of bones were imported; and this amount, at the same place, had increased in 1835, to 27,500 tons.

GUANO.

Guano is another manure of animal origin, which has lately been brought to notice. It is the excrement of sea birds, and the immense masses of it existing on the rocky isles of the Pacific, in the vicinity of Arica in Peru, are the accumulations of centuries. That, in this state, it differs from the newer excrements, can scarcely be questioned, as the action of the atmosphere must have produced many chemical changes during the lapse of years. Analysis shows it to consist chiefly of insoluble and soluble salts, chiefly phosphate of lime and organic matter, or salts 32 parts, and organic matter 68. A large portion of the organic matter is uric acid and ammonia; and regarded as a manure, it may be considered as a urate of ammonia. It appears as a fine brownish powder, with a strong marine or fishy smell, and gives off ammoniacal fumes when heated. Several ship loads of this manure have been carried to England; and the experiments show, what indeed the analysis would prove, that it is to be classed among the most efficient of manures. It has succeeded well, whether applied to grain, grasses, or to roots. There is no necessity of enlarging on this manure here, as it is not probable that it will ever be introduced to any extent into the United States, while we have so many easily accessible sources of fertility that have as yet hardly been touched, among us. It may be mentioned in this place, that the dung of domestic fowls is one of the most valuable of farm manures, far exceeding in power that of the hog or horse; and though not equal to guano in ammonia, probably from there not being as much animal food used in its production, still deserving more attention in this respect than it has received.

VARIOUS ANIMAL PRODUCTS.

All animal products capable of putrefaction or decomposition, can be converted into manures; fish, flesh, gristle, sinews, skin, horns, hair, wool, and indeed all animal solids or fluids are of this character. The man who allows his dead animals to putrify and waste away above ground, is guilty of great improvidence; and converts what might be made a valuable manure into a decided nuisance. A dead horse covered with earth or vegetable mold, mixed with a little lime or gypsum, will, when decayed and converted into a manure and spread on the soil, add to the value of the corn or wheat grown, not enough perhaps to buy a valuable new one, but not unfrequently more than the worth of the original animal. A more disgusting sight can scarcely be imagined, than to see the fences and trees around a farmer's yard dressed out with dead lambs or other defunct animals in the spring season. All such, should be buried at once, and thus made available in other forms.

FISH.

Of the substances named above, fish is the one most commonly used as a manure. In the vicinity of the sea, large quantities of fish are annually used in enriching the soil. This is particularly the case on Long Island and Rhode Island. They are sometimes spread broadcast on the earth and plowed in; at other times deposited in the hills of corn; sometimes spread over the meadows after the crop is mowed, and allowed to putrefy in the open air. The stench, where the putrefaction goes on in the open air, is intolerable; and can only be endured by those whose olfactories have been accustomed to the nuisance. This is a most wasteful practice, and should long ago have been abandoned.—Treated in this way, but a small part of the actual value of the fish is realized; and it is not to be wondered at, that where the methods of using this manure are so different, widely different ideas of its value should be entertained.—Fish should never be used fresh, or thrown at once upon the soil. The true way of preparing them as a manure, is to make them into compost, by placing them in layers with muck, rock weed, peat, or even common loam, to putrefy. Where the soil is heavy or inclining to clay, where the compost is to be used, common shore sand, containing as it does, large quantities of particles of carbonate of lime, will be found useful as a composting ingredient with the fish. When the fish are decayed or putrefied, the mass should be dug over, the parts thoroughly mixed, and if much ammonia or offensive gas is liberated, a covering of earth should be given, and the mass be allowed further to ferment before using. In this way, fish never fail of being a valuable manure. Rock weed, eel grass, or in short any of those vegetable or animal matters that abound on the sea shore, may be advantageously used in the preparation of these composts.

REFUSE OF FACTORIES.

There are many manufactories, particularly those of skins, furs and wool, where large quantities of manures of the most powerful kind are annually suffered to go to waste, though to a much less extent than formerly. The refuse of such establishments, now frequently considered, and justly as now treated, a nuisance, may by simple application to the soil, or still better by being made into compost, be used as the best of fertilizers. One of the best farmers and most successful breeders of our country was driven into the business of agriculture, in self defence as it were. He was an extensive manufacturer, and the difficulty of disposing of the refuse and waste of the establishment, compelled him to purchase a farm in the vicinity of the city, in enriching which, these matters have been most successfully employed. Those farmers who formerly could not be induced to receive such refuse materials as a gift, would now, after the proof they have seen of their value, be happy to purchase them at a liberal price. The furrier, the tanner, the morocco manufacturer, comb maker, &c. &c. are all dealing in materials of the utmost value, when applied to the soil as manure; and the farmer little understands his true interests, who, living in the vicinity of any of these does not avail himself of these refuse matters to the utmost extent permitted.

MANURE OF WOOL.

Perhaps there is no substance more rich in matters valuable as manures, than the washings and refuse of woolen factories. Chaptal was one of the first to call attention to this matter, and the instances he gave of their fertilizing power were of the most convincing kind. It is but very lately, however, that any attempts have been made in this country to render the refuse of our factories available. All remember, when around every factory and every clothier's shop in the country, piles of refuse wool, clippings, pickings of cards, and sweepings, accu-

mulated in masses, never thought of as of value, but considered as matter of which the owners would most happily be quit. The method of disposing of them, when they no longer could be tolerated, was to throw them into the river; to apply them to the garden or farm was not once thought of. Not long since, in one of our villages, I noticed a garden, the vegetables of which had a luxuriance forming a striking contrast to others near them, and the cause of the difference was asked. "It is all owing to the refuse of that clothier's and carder's shop," was the reply. "I saw in the Cultivator a notice of the value of such manures, and the owner of the shops gladly availed himself of my offer to remove it at my expense. I gave my garden a good dressing and as this is the second year, you may judge of the value of the manure. It is probably the last I shall obtain, however," he added, "as the mill owners, after seeing its effect on my garden, are now as anxious to save this refuse matter as they were to get rid of it." The oily or sweaty matter on unwashed wool, is a soapy substance having a base of potash, with an excess of oily matter with slight traces of the carbonate and muriate of potash, all valuable as manures; and as all are easily soluble in water, such water should never be lost. A wool merchant at Montpelier, had his washing house in the midst of a field, the greater part of which he had, by the use of this wash, with which he watered his plants, transformed into a fine garden. The experiments made by Judge Buel and by Mr. Bement, with hog's bristles and horn shavings, were conclusive as to the value of these substances for manures. In short, as all substances of this nature are nearly pure pelatine, with a slight addition of the phosphates of lime, it is evident their decay must furnish an abundant supply of ammonia to plants, and therefore render them valuable as a manure.

LIQUID MANURE.

There is but one other manure of animal orign to which it will be necessary to allude in this place, and that is urine, or as it is commonly called liquid manure. Analysis proves that this is a substance peculiarly rich in materials required by plants, and experience enforces the results of analysis; yet not one farmer in a thousand makes an effort to convert this mine of riches to any account, but the whole is most generally lost to him. Dr. Dana gives the following as the constituents of cattle urine, which may stand as the type of all others, though human urine and that of the horse differ from this in the character and quantity of some of the salts contained in them:

Water	65.
Urea	5.
Bone dust	5.
Sal ammoniac and muriate of potash	15.
Sulphate of potash	6.
Carbonate of potash and ammonia	4.
	100.

VALUE OF URINE.

Compared with cattle dung, it will be seen that while that gives only 2 lbs. of carbonate of ammonia to 100 lbs. of dung, the urine gives 5 lbs. of ammonia in its urea, and nearly three times that amount in the other ammoniacal salts. One-third of urine is composed of salts, whose action on vegetation is of the most energetic and favorable kind; and yet there are thousands who call themselves pretty good farmers, who use all reasonable precaution to preserve the solid parts of their animal manures, that have never made an effort to save that which is of far the greatest value, the liquid part. But it must not be forgotten that soils must contain decayed organic matter or humus for these salts to act upon, otherwise liquid manure or pure urine can do no good. Where the wash of the barnyard and stables is saved, the loss of a large part of the urine is prevented; but when, as is too often the case, this is wholly lost, not only is the urine thrown away, but a large part of the soluble humus of the manure accompanies it. It is an excellent plan, therefore, to have some reservoir for the reception of such liquid matters as would otherwise be lost. If this cannot be done, cover the bottom of your yards with muck, or even common loam, as this will absorb and retain much of the urine and liquid matters of the dung. Experience has demonstrated that a load of loam, saturated with urine, has a more powerful effect on vegetation, than the same quantity of best rotted stable manure. Human urine is richer in salts useful to vegetation than any other, containing, according to Dr. Thompson, in 1000 parts 42½ lbs. of salts. The slightest attention on the part of the farmer, might prevent the loss of this; and many a load of swamp muck, or loam mixed with gypsum, might, when saturated with urine, be added to his available manures. Liquid manures, or rather urine, differs much in the salts it contains, according as the food is rich or otherwise. "White turneps give a weaker urine than the Swedish, and green grass is worse than either," according to Dr. Dana. Turner and Liebig found that the urine of fattening animals is richer in salts than that of store animals. Indeed, the law so well known with regard to solids, that the richer the food the more valuable the dung, it is probable holds good in regard to the urine also.

SOOT.

Soot is a valuable manure, peculiarly rich in humus as well as salts, and in its composition more nearly allied to the solid substance of animals, than any thing else. It contains of humus or geine 30.70, of nitrogen 20, and of salts of lime 25.31 parts in 100. It also abounds in salts of soda, potash and ammonia. According to the analysis of Dr. Dana, 100 lbs. of soot contains as many of the valuable salts as a ton of cow dung, and its nitrogen, compared with manure, is as 40 to 1. The ordinary farmer can make but little use of soot, as it is not to be had in the country in any considerable quantities; but those in the vicinity of cities may avail themselves of this manure with much profit. For the gardener or the floriculturist, soot is an excellent manure; but care must be taken not to use it too freely, as we have known tender garden plants at once destroyed by too liberal applications of it, particularly in a dry state.—Mixed with water, in the proportion of six quarts of soot to one hogshead of water, it has been found a most efficacious liquid for watering plants, particularly those grown in green houses.

ASHES.

Ashes, leached or otherwise, are of great value as a fertilizer, especially when used on soils that are sandy or light. Unleached, the potash contained goes to form silicate of potash, and gives the supply of silex necessary for the stems of the grasses or corn; and leached, although the potash is the greater part of it separated, the remaining phosphates of lime and magnesia go far to restoring to the fields on which such ashes are strewn, the necessary matters of which previous cropping has deprived them. 100 parts of the ashes of the wheat grain contain 32 parts of soluble, and 44 parts of insoluble phosphates, in all 76 parts. The value of ashes abounding in the required phosphates, when used on grain lands, may be seen at once, as well as the folly of those farmers who waste or sell the ashes produced in their dwellings.

[To be continued.]

GEOLOGICAL DEFINITIONS.

The primitive earths are four; clay, sand, lime and magnesia.

Clay is called, by geologists, alumnia, alumnine, or argilaceous earth.

Sand is called silex, silicious earth, earth of flints.

Lime, as it exists in the soil, is commonly called calcareous earth. The term calcareous is not properly applied to any soil, unless it will effervesce with acids.

Each of these earths, answer a determinate and specific purpose in the economy and growth of plants, and the perfection of soil lies in a mixture of the whole.

Vegetable matter.—All vegetable substances in a decaying or rotten state.

Animal matter.—All animal substances in a putrifying state.

Organic matter.—A term applicable to both animal and vegetable substances in a putrifying state.

Vegetable mould—The earthly remains of vegetable substances which have either grown and decayed on the soil, or have been conveyed thither in the progress of cultivation.

Loam is a combination of vegetable mould with the primitive earths.

Marl is a substance consisting of lime with a small portion of clay, and sometimes of peat, with marine sand and animal remains. It is useful as manure, and is distinguished by shell, clay and stone marl.

From the American Farmer.

BOTS IN HORSES—MURRAIN IN CATTLE.

It is the duty of every person who has any experience in the treatment of diseases in that noble and useful animal, the horse, to communicate to the public.

It was my province, a few years since, to have much to do with that noble animal, and of course among the number in my possession, I would find a number that would be diseased, and very often my skill and experience would be taxed to find a remedy for some of the diseases to which they would be very often subject.

The most formidable disease to which this noble and useful animal is addicted, and there is none more alarming in its attacks, is the bots.

I had consulted the highest authorities in the veterinary art for the treatment of this disease, and faithfully used the remedies laid down, without any benefit. I was induced from interest, and also for the very high regard which that noble animal, the horse, held in my estimation, to use every expedient in my possession, to cure this formidable disease. I had another motive: I had lost several very fine horses by this disease, which induced me to use and try every experiment which my ingenuity could invent, to arrest this disease among my horses, and prevent, if possible, its recurrence among them.

I am satisfied and feel convinced that I will offer to the public an infallible remedy for the bots.

Some six years since, I purchased a very fine horse, but he had the appearance of laboring under some disease. I commenced a course of treatment, which I thought would relieve him, and which I had pursued in the treatment of some other horses which had the appearance of being diseased in a similar manner to the above mentioned horse, with decided relief; but in this case all my remedies failed of their desired effect.

I was induced to try the use of lime in the treatment of this case, as I was confident he was filled with grubs or bots, as he had discharged several. I commenced by giving a table spoonful of slacked lime three times per week, in bread mashes. After pursuing this course for near two weeks, the bots began to pass off in quantities varying from ten to twenty, which he would expel during the night, from his intestines. In the meantime his appetite began to improve; and in six weeks he was one of the finest looking geldings I ever saw. From that day to this, I have kept up the use of lime among my horses with decided benefit. As an evidence of its good effects, I have not lost a horse since I began to use it.

A large number of the bots which he would expel from his intestines, had the appearance of being dead. I was induced from this fact, to put some of them in a strong solution of lime-water; as I had frequently put them in spirits of turpentine, without producing any effect on them, but all those that I put into lime were perfectly dead in eight and forty hours.

Lime is a certain preventive in keeping cattle from taking the murrain. As an evidence

of this fact, I have used it among my cattle three times per week, mixed with salt, for three or four years. In that time I have not lost a single cow, or steer, or ox, by this disease; in the meantime, some of my neighbors have lost nearly all the cattle they owned.

I will give you a stronger case than the one above mentioned. One of my neighbors who lost all his cattle, had a neighbor living within two hundred yards of him, who had several cattle which ran daily with those that died, and his cattle all escaped. He informed me that he made it an invariable rule to give his cattle salt and lime every morning.

I have no doubt it is a sure and infallible remedy for bots in horses, and a preventive of murrain among cattle. J. W. J.

COMMUNICATIONS.

STANFORDVILLE, PUTNAM COUNTY, October 17, 1843.

Messrs. Editors—As I have seen no piece in your valuable paper on the subject of making pork, and curing and preserving bacon, I shall undertake, in this communication, to give you my practice in that branch of husbandry, and will say, in the outset, that if "A Lover of Good Ham," or any one else, has ever tasted of better ham than I can show at this time, they have ate of ham that was not preserved in a Southern climate. As to my own part, I have never seen better—not even the Baltimore and Smithfield cured hams.

On the subject of making pork, I shall have but little to say, except that hogs intended for pork, the ensuing winter, should be kept in a thriving condition, from the time they have the benefit of the harvest-fields. My practice is to keep them in growing order, and the first field of corn I gather, which is in September, I separate the hogs intended for pork, and give them the pick of the field; always having another field ready by the time they have consumed the peas, &c. on the first; in addition to this, I give them one feed of corn per day, with salt about three times a week. By the time they have had the run of all my corn and pea-fields, in this way, it will be the last of November or first of December. (I will here say that I never suffer my stock hogs to go into my pea-fields, as it ultimately proves to their injury.) I then get them in a small lot and feed them on corn to harden their fat. I now have a place for scalding, &c. put in readiness, as the hogs are by this ime fat; and by no means miss the first weather that will be safe to kill hogs after they have been in close feed a few days. And for the purpose of saving the offal, &c. well, and doing every thing in good order, I slaughter about half; always selecting the best. Then put every thing in order for the next killing, which I have done in from 10 to 15 days. By making two killings of my pork, I manage the whole business in better order than I could do if I had it all on hand at once.

If the weather is unfavorable for saving pork, I have always found it best to kill in the evening, and let the hogs hang out all night. By so doing the cutting up is performed much easier, and the pieces can be cut smooth and nice, which is very important. In this case I have the meat salted up as fast as it is cut out; but if the pork is killed in the morning, I have it cut out late in the evening, and spread on the smoke-house floor, on boards, for the night, and sprinkle a little salt over it, to draw out the bloody water, and early the next morning I have it all taken up and salted well; first trimming every piece smooth and nice, by taking off the little fragments, &c., and am sure to have more salt put on than the meat will take in—then I know there is no lack for salt. In cutting out my pork, I make but six pieces of a hog after the head is taken off, viz: two hams, two shoulders, and two sides, and do not take the ribs from the side pieces, as doing so is an injury to the balance by giving it a chance to rust where the ribs come from.

In salting, I use about half a pound of saltpetre to a 1000 lbs pork, (only on the hams and jowls from 1000 lbs.) and I always use hogsheads to salt the hams in. If I have not hogsheads enough to hold all my pork, I use boxes for the sides; but have always found meat to do better to lie in the brine than to have the brine drip from it. It depends on the weather as to the length of time I let pork lie in brine. In common weather four weeks is enough, if it be very cold five weeks is best, if it be a warm time, three weeks will do. To make good bacon, pork should be killed early enough to go through the salting process by the first of January, by which time it should be hung up to cure. I salt my meat in one house and cure it in another. The only particular advantage that I know of in this is, that the first killing of pork can be curing while the other is in salt. My meat being hung up, (for this a dry, windy time is best,) after the first day I have a smoke under it every day, (except it be a very dry, windy time,) till it is thoroughly cured, which will be by the last of February; about which time, and that the dryest day we can get, we have as much of it taken down as we wish, and have plenty of good hickory ashes sprinkled on the flesh side of each piece, and have as many shelves, at a convenient height round the smoke-house, as are wanting to lay up each piece of bacon, side by side, with the skin side down. There is nothing more to be done till this bacon is wanted for use, except about mid-summer it may be examined to see if any worms have collected under it; if so, they must be killed. As to skippers, they have not been known in our bacon for years. The bacon we leave hanging we have smoked occasionally with very fine chips, and sprinkle a small quantity of ground sulphur over each parcel of chips. This will clean out the flies, &c.

If any one of your readers should object to the use of ashes on bacon, as it is hard to clean off, I would advise them to put their bacon down in salt or charcoal, either of which is, perhaps, preferable to ashes; but in the use of either boxes must be used instead of shelves. I should have used salt long before now to keep bacon in, but never can have it ready for the purpose.

I must now say something about the smoke-house, as with a shackling, open house, I consider it almost impossible to make and save good bacon. To all others I prefer a framed one, closely weatherboarded, well shingled, and so close in every particular, that a fly cannot find its way in when the door is shut. My own is pretty much of this order, and is rat-proof To make a smoke-house rat-proof is very important, as rats are very destructive in a meat house, and the object is easily accomplished and the building costs but a trifle more. It is done by having two sets of sills, and letting one set in the ground, and placing the other set, with which the house is framed, on the set that is let in the ground, then weatherboard from the upper edge of the lower sills; ram the dirt well to the outside, and drive thin heart plank and confine to the sills on the inside, taking care to ram the dirt well round the inside, and if the door and weatherboarding be well done, and the roof be tight as it should be, I will warant that a rat never gets in before the shingles rot so that he can cut them.

Allow me, in conclusion, to inform your correspondent A. B. L., of Newnan, that I shall comply, in a short time, with his request, and give him my method of ditching hill sides.

Yours, respectfully,

JOHN FARRAR.

BIBB COUNTY, September 29, 1843.

Gentlemen—If there is any thing desirable in life, it is to improve in every thing that is beneficial to, or that tends to better the condition of mankind. The man who takes no interest in the great improvements that are, and have been, going on for a series of years, must be a strange being. In the last fifty years, the farmers and mechanics have carried their improvements to an extent alike honorable to themselves and beneficial to mankind. I am now receiving a paper from Boston in less time, perhaps, than I could have received one from Savannah thirty years ago. So much for improvement and enterprize. But with such facts as this, and a thousand others of the kind, before our eyes, we find men among us that are not only idle, and doing nothing to advance this great work of improvement, but are actually doing what they can to retard its advancement. This is certainly strange. Wealth is the fruit of labor;—if, therefore, labor is properly directed, it must increase the wealth of the country. I have seen many strange things in life, but the way that agriculture, agricultural improvement, and agricultural papers are treated among us, is certainly one of the strangest things I ever saw. It is admitted that agriculture is of more importance, in a pecuniary point of view, to the people of Georgia, than any thing else, or, perhaps, than every thing else, and after all there is little done to improve it. I have long thought that one of the great causes of so much idleness and vice among us is, the slovenly manner in which agriculture is conducted among us. When a youth is called upon to display his physical powers under circumstances that promise nothing but endless labor, without either profit or pleasure, it is not strange if he becomes disgusted with such prospects, and, in the end, becomes an abandoned victim of vice—indeed, it is just what we might expect, according to the common law of cause and effect. I wish that parents

and every body else would think of this. If they wish their children to become virtuous and industrious, they must take the proper steps to produce that desirable end. Children can be made to work by a constant application of the rod, and they can be kept out of mischief by shutting them up in a closed room, but this is not the way to make them industrious or better. If we wish to make children or adults industrious, we must learn to make their business agreeable and interesting. In this way it can be done, and in no other way. Children cannot divorce themselves from the love of happiness any more than adults, and if they do not find happiness in their business, surely it is not wonderful if they look for it elsewhere. If agriculture is properly conducted, it equally delights and profits both young and old, but if it is not properly conducted, it fails to interest or reward the laborer. In view of these facts, why neglect to improve the business? Why patronise so many political papers, some of which seem to have no higher or holier object than to distract and misguide the people, and neglect the only agricultural paper in the State? Have the people made up their minds to live on politics and President making? If they have, we may look for clean teeth and light purses. The good of the country depends on the virtue and wisdom of the people more than on the President. If the people are wise and virtuous, prosperity and happiness will be our lot, let who will be President. But if the people are ignorant and vicious, no President, nor any form of government, can save us from wretchedness and ruin. We all wish, or profess to wish, for the prosperity of Georgia; but Georgia cannot be prosperous unless the proper steps are taken to make her so. If the people consume as much or more than they produce, they never will add any thing to their capital. An individual that has his head and heart trained to the dirty business of swindling, can sometimes fill his pockets by emptying those of his neighbor; but communities must get rich, if they get rich at all, by producing more than they consume. The true friends to the country are those that, by precept and example, are promoting industry, virtue, economy, enterprise and improvement, whether they understand President making or not.

We have the elements of wealth and prosperity in Georgia to a great extent, and we abound in politicians, wise men and reformers; and after all, it is said the country is in a bad condition. If this is true, if it is true that we possess the elements of wealth and prosperity, and if it is true, also, that poverty and vice abounds among us, it is because the proper steps have not been taken to produce a better state of things. I suppose we have several hundred grog shops in Georgia, and, I believe only one agricultural paper, and I fear there is no great interest taken in that. This is a strange affair. No man that thinks at all, expects any thing from these nurseries of evil but mischief, and yet we support hundreds of these dens of iniquity, that are corrupting the morals of the people and doing evil in a thousand shapes, while we are showing but little zeal to promote the great work of improvement that is going on in the world. I do not like all this. I fear it will not form a very desirable chapter in our history. I fear it may be said to old Georgia, "one thing thou lackest," and that one thing is, want of zeal in the things that promote our true interest—virtue, wisdom, industry, economy, enterprise and improvement. These things will make us get rich and happy, let who will be President.

I feel a deep interest in the "Southern Cultivator." I would rather every grog shop in the country should lack patronage and so depart, than that our Georgia agricultural paper should languish. I am sure that improvement in agriculture is among the most desirable things that could be introduced among us, and I know of no means that seem to me so likely to promote that object as agricultural papers and societies, and I earnestly recommend the people of Georgia to patronize the one liberally, and form societies in every county.

Yours, truly,

A. E. Ernest.

Covington, Newton County, October 10, 1843.

Messrs. Editors—I have but lately become a reader of your most excellent paper, the Southern Cultivator, since which I have seen several articles on preparing seed wheat to prevent the smut. I saw one in the last number, (the report of the Newberry Agricultural Society,) which comes up to my notion of the thing rather better than any I have seen, though the committee seem to speak of it with not as much confidence as I should have liked. As it is common for literary men, when they find out any thing new in science, to communicate it to each other for their benefit, why should not farmers, if they are bunglers, do likewise? There is no good reason; and as a farmer, if I may be so called, I wish to add my testimony in support of the preparation recommended in that report. I think the year 1835 was the first of my knowing any thing of soaking wheat in a solution of bluestone. The smut had become very injurious to the kind of wheat that my neighbors and myself sowed, (the red May.) My neighbor soaked, in 1835, to sow all of his crop but one acre—he sowed that with unsoaked seed. He brought the whole of it to me to thrash. I discovered some little smut in the wheat that was soaked, and I think one third of the unsoaked was smut, although sowed side by side.

The next sowing I got of my neighbor the same kind of seed, (that was, of the old wheat soaked the year before,) and prepared it myself by soaking, and have sowed the same kind ever since; and as to smut, I care not for smut mills to take it out, as there is so little it would not be worth while to be at the expense of building them. My plan of soaking is, in the first place procure good bluestone, (say of the deep color, if not, put the more in,) get a small hogshead that will hold some six or seven bushels, put in it five bushels of seed wheat, fill it up with water some four inches above the wheat, as the wheat will swell some; take three-fourths of a pound of bluestone, dissolve it in warm water, pour it in the vessel with the wheat, stir it till you think it is well mixed with the wheat; let it remain some 6 or 12 hours, owing to the weather—if warm six hours will do. When you take out your wheat, save the water you soaked the first in; add for the next five bushels one-half pound of bluestone—so for every five bushels. Lay your wheat out on a floor some five hours and it will be fit for sowing. I would recommend every farmer to sieve his wheat.

William Brown.

ON CLEARING LAND.

Messrs. Editors—Permit me, through your paper, to communicate some of my ideas to my brother farmers on clearing land—I might say experience. The plan I have tried successfully for several years, is this:—I grub, cut the firewood, and rail timber, kill the timber left standing, and split the rails in the course of the fall and winter; heaping no more brush than will give me sufficient pass-way to haul the firewood out as I need it. In that condition I let it lay one year, with the exception of shrubbing the ensuing summer, and the spring following I have a fine piece of mellow new ground, ready for inclosing and cleaning up, the standing timber all dead, the fibrous roots, the leaves and trash all rotten, and the land very often producing a double crop the first year. Nor does it stop there; for I believe the good effects may be seen for six or eight years after. Need I tell any rational man that the first year's rest is worth more in enriching the soil, when the brush and timber are lying on it, than any two or three years after it has been in cultivation? Let me invite them to look at our wood-lands, with the growth so dense that you can scarcely ride through it, the face of the earth covered two or three inches deep with leaves, and ask them to determine whether, if all be cut and burnt off the same winter, as is usually done, their land is not greatly impoverished? Need I argue with my brother farmers so plain a case? I think not; for if they will reflect one moment on the two plans, I believe they will try mine, and I venture to say if once tried they will pursue it in future.

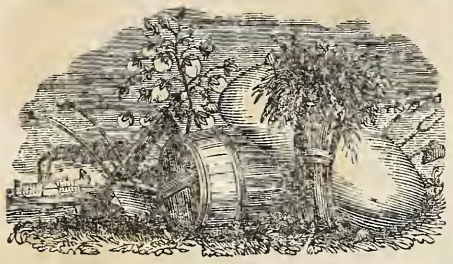
My next clearing I expect to let lay two years, with all cut and killed on it but the rail timber, and the second winter I will cut and split the rails, leaving all on the ground one year, and I expect by doing so my land will be worth more than double the same lands cleared in the usual way.

And now, Messrs. Editors, in looking over your paper, I am surprised to find so few contributing towards supporting it with their practical modes of farming. We want Georgia farming—surely no place needs improving more than middle Georgia—and I do hope that there is intelligence and patriotism enough in middle Georgia to make your paper appear what every good citizen should wish it to be.

Robert Caldwell.

Cure for Swiney.—As soon as you discover your horse is swineyed, take three ounces of rusty bacon, fry it over a slow fire until brown; take out the crackling, and, when milk warm, add the yolks of three eggs, and a table spoon-

ful of spirits of turpentine; stir all well together—apply one table spoonful to the shoulder by rubbing well, and take a piece of cloth several folds thick, lay on the affected part, and, with a hot iron, bathe the parts once each day.



WEDNESDAY, OCTOBER 25, 1843.

FATTENING PORK.

The communication of Mr. Farrar, in this number, has brought this subject to our mind, and we desire to lend our efforts to correct the great error into which many, indeed almost all, of our planters have fallen, in fattening pork. It is a common practice, we know, for our planters to turn their hogs intended for pork, into a water lot and feed them on the ground, with corn in the ear. No system could be more erroneous, whether it be considered for the excellence of the pork, or the economy in making it; both of which are considerations not to be overlooked by the prudent planter. It is well known by every planter who investigates the matter, that hogs put up and fed as we have stated, fatten slowly, and consequently consume so much food as to render the pork expensive. The reasons are obvious to any reflecting man—the food is not given to them in its most nutritious form—they eat too much dirt and drink too much water; the former of which is injurious in any quantity, however small, and the latter is only beneficial in small quantities. We might enlarge upon these reasons, but we deem it unnecessary, as every reflecting man knows, that unbroken corn does not afford the same nutrition to animals as broken; that dirt is injurious to health, and that hogs, like men, cannot eat so much when the stomach is filled with water, as when it is not. We, therefore, propose to suggest to the planters of Georgia, a plan of fattening pork, which we have tried and seen tried by others, and can consequently recommend it with the greatest confidence in its success, both for economy and making fine pork. We have no objection to the plan suggested by Mr. Farrar, of giving them the benefits of his early fresh fields, but when taken from the fields they should be put in a close pen, well exposed to the sun, large enough to hold double the number of hogs to be fattened, with good plank floor, so tight as to prevent their feet from slipping through, and a sufficient descent to admit the water to pass off, a trough extending from one end of the pen to the other, and one half of the pen (the north half) covered, to shelter them from the rain, and afford them an opportunity to bask in the sun.

Food. This should be corn meal, ground as fine as if designed for bread, made wet till about the consistency of, or a little thinner, than dough, (and if boiled it would be better,) given them three times a day, in such quantities as they will eat readily, so as never to have any food in the trough when they are fed. The proper quantity, the feeder will ascertain in a day or two. No water should ever be given them, except what is mixed with the food, and about once or twice a week, some fodder or shucks may be given them, and a little salt should be mixed with their food twice or thrice a week.

To persons who have never tried or heard of this plan of fattening hogs, it will appear very strange, but we commend it to them with every confidence that it is more economical than any other, and that the pork made by it is greatly superior to that made in the usual way.

One word as to hams. We, at the South, are too prone to regard every thing coming from abroad, the North, the far West, or any where else, which is heralded with a high sounding name, as better than any thing of home production, and hence we have heard so much about Westphalia, Baltimore, and Cincinnati cured and canvassed hams, &c. &c., that many people are almost ready to conclude that a ham made and cured at the South, is scarcely fit to be introduced on the table; particularly on any special occasion. This is all erroneous, and is to be attributed alone to the fact that we have been too little disposed, generally, to rely upon our own resources. Few, therefore, have learned that hams equal to any *in the world*, are those cured at the South, when proper attention is paid to the pork and to the curing. This is a broad assertion, but we make it with a full knowledge of its import—for we know many planters in Georgia, from whose smoke houses we can obtain hams which no Smithfield, Baltimore, Cincinnati or Westphalia hams surpass, and very few, if any, ever equal. We beg the planters of the South, therefore, to rely upon their own resources in making hams—and to the preparation suggested by our friend Farrar for putting up hams, we beg leave to suggest the mixing of 15 to 20 pounds fine brown sugar, or 1½ to 2 gallons of good molasses, to the salt for every thousand pounds hams.

Bommer Manure Method.—We have received from the proprietors, Messrs. Abbett & Co., of Baltimore, the following notice:—"Subscribers who are awaiting the appearance of the new edition of this method, are informed that it is now in press and will be out in a few days, when their orders will be immediately filled."

Consumption of Great Britain and Ireland.—It is stated that the annual consumption of the people of Great Britain for food, clothing, &c., is as follows:

Agricultural produce for food,	£295,179,000
Manufactures,	262,085,000
Imports, (raw produce,)	55,000,000
	£612,264,000

The exports from Great Britain to the whole world, for 1840, were as follows:

Total amount,	£51,406,430
To the Colonies	17,378,550
Actual foreign trade,	£34,027,880

From the S. C. Temperance Advocate.

NEWBERRY AGRICULTURAL SOCIETY.

REPORT OF THE COMMITTEE ON THE HORSE.

There is no subject amongst the animal creation, that can more justly claim the attention of every man, than that noble and useful animal, the horse. There are a great number of animals under the control of man; on reflection, we must say, that the excellent and noble horse, unquestionably, is the most serviceable. How often do we see him the sole dependence of the poor farmer and his family. Trace him in all conditions, you will find him faithful, affectionate, and no less useful. For the quick communications by posts and stages, even with the most remote parts of the Union, we are indebted in a great measure to the horse. Even our happy republican government has been established, protected, defended, by the means and aid of this noble animal. Reflect for a moment, and you cannot help but see, how battles have been won, tyrants dethroned and liberty sustained, by the aid of this noble animal. How often are we conveyed in safety at night, amidst difficulties, dangers and unfamiliar roads. View him in the service of man in every situation, when treated with humanity, and he is always ready and willing, with an aspect happy, cheerful and gay.

If, by our Report, we can aid in disseminating information to the public in the way of breeding and raising this noble animal, the horse, we think we shall have done some good. The breeding and raising of horses is both an amusing and pleasing task, and is well worth the attention of every person whose situation will admit of it. In the first place, be particular in selecting a good stock to breed from, in order to raise a beautiful and good horse. A stallion should be made choice of, that will be a good cross and of good blood; he should not be less than five feet two inches high, but five feet four inches high is a preferable size. He should be well proportioned, elegantly formed, and clear of all defects, particularly the spavin and blindness, and should be a sure foal getter.

A mare should be made choice of, not less than five feet high, five feet four inches is preferable, with a delicate head and neck, great length of body, large belly, her thighs long, large, full and bulging, her fore arm large and swelling towards her breast, hocks broad, strong and boney, legs of moderate size, thin, flat and sinewy, pasterns rather long and small than otherwise. When you commence breeding with a mare of the above description, you are almost certain of raising a valuable colt.

Indeed, there appears to be a great similarity in the blood of horses to that which exists in man, as respects their good and bad qualities, shape, &c. We find vice common throughout some families, while we see virtue reigning in others. One breed of horses, under every care and attention, will only raise you a coarse horse or pony; whilst good blooded horses show strong marks of beauty, activity and size.

When a colt is foaled early in the spring, he or she will be under every benefit that can be derived from size, strength and age; it would be advisable to put a mare to a horse at such time as would produce a colt from the 10th to the 15th of April. A mare generally goes with foal eleven months and as many days as she is years old. After your mare has been put to the horse of your choice, she should not be confined only in bad weather, during her being in foal.—Mares frequently produce colts at the age of 15 years, and sometimes 20 years of age. They are not apt to produce at the latter age.

When the mare is near foaling let her be to herself; and if early in the season, let her have a good roomy stable to foal in; in good weather, let her and her colt be turned into a lot of wheat or barley; do not let them be turned in a lot where there is green oats, it is poisonous to the colt. Wean the colt about the 15th of September, or the 1st of October, in a stable, until it is done fretting after its dam; then turn it in a lot; if you have more than one, they will do best to

gether; stable them at night, and turn them out in the day time, except in bad weather; force them all you can the first winter. After they are one year old they should not be kept so fat, nor permitted to get poor: a stud colt, which is intended to be kept as such, should be separated from other horses at 11 months or a year old, and stabled of nights; his rack and manger should be so high as to strain him a little to get food; the windows of the stables should also be high, as he will be looking out at them; by this means his shoulders will be thrown back and his withers raised. How graceful it looks for a horse's shoulders to be well thrown back, and his withers well raised.

The best plan we have found to increase a colt's quarters, enlarge his muscles, and other material parts, is to keep him in the stable frequently for several days together, which will animate him, then turn him out in a lot, and encourage him to run and exert himself all you can, as his parts will acquire size and strength in proportion to the use made of them. When a colt arrives at the age of two or two and a half years old, it is time he should be handled and taught the use of the bit. It is of great consequence he should be first gentled by a person who well understands the management of horses, to prevent bad habits; as first impressions are hardly ever entirely removed from mare or horse.

We recommend corn for colts in the winter, and oats in the summer. Colts and horses should be furnished with good stables; great attention should be paid to stables, the removal of all offensive and putrid matter, to prevent diseases, which frequently proceeds from such neglect. A log stable is preferable to any other, on account of its admitting a free circulation of air in the summer; and by the use of rough-edge plank and straw in the winter, can be made warm. The rack should be smooth, high and firmly fastened to the wall, which will prevent a horse from injuring his eyes, skinning his face, and doing himself other injury when feeding. The upright pieces in a rack should be four or four and a half inches apart, to prevent long food from being unnecessarily wasted. The halter should never be tied to the rack, (horses have been ruined by such carelessness,) but should be passed through a ring in the manger and confined to a long, smooth piece of wood, weighing about a pound. A stall should be four and a half or five feet wide, which will allow him to lie down with comfort.

Very respectfully submitted,
H. H. Kenan, Sec'y.

REPORT OF THE COMMITTEE ON COTTON.

The Committee on Cotton respectfully report, that their object is not to point out the manner of producing the greatest quantity of cotton to the hand, for that is generally too great already; but to show the easiest and most perfect manner of cultivating the plant, so as to produce the greatest quantity to a given number of acres; and as the manner of cultivation must be much influenced by the quantity of cotton planted in proportion to that of other kinds of crop, the Committee will first direct your attention to that part of the subject. They are of opinion that, in order to enable the planter to give that attention to his cotton crop which its proper cultivation requires, he should not plant more than six acres to the hand, allowing eight for corn, and fourteen for wheat and oats,—one-half for each. They are aware that some of our high-pressure planters will say that this is not enough for cotton, for some of them plant as much as 10 acres to the hand; but for those who wish fair and easy sailing six acres will be plenty. With this quantity the planter can cultivate his crop, and attend to every necessary operation of his plantation, without that hurry and pushing which is always the consequence of a large cotton crop, and which is so injurious to negroes, working stock, and even to land. The planter, by planting moderately, is enabled to drill his corn, by allowing time for hoeing it, and thereby preserves his land from washing. He has sufficient time for harvesting and sowing his small grain, which is often neglected and injured by the press of a heavy cotton crop. The quality of his cotton is also much superior, by being gathered earlier, and his negroes are saved from the horrid train of diseases and death which are produced by being exposed, in picking a large crop, to the inclemencies and rigors of the weather through the whole winter; whereas, the quantity which the committee propose can always be got out with ease, before the hardest of the winter sets in.

Having determined on the quantity, the land which is intended for cotton should be well broken up with a scooter, and if in stubble, should be turned over in the fall, or early in the winter, with a twister, so as to allow time for the decomposition of the grass and stubble, for if this is neglected, it will be impossible to get a stand; it should then be laid off in rows, three feet apart or wider, owing to the quality of the land; and if necessary to manure, the furrow should be opened out very deep, by running, if necessary, two shovel furrows in the same place, and after scattering in the manure, a bed should be thrown on it as high as possible with a twister plow, and where the ground is sideling, drawn up with a hoe, so as to prevent the water breaking over; or if too low and wet, it should be drawn up with a hoe, to prevent the cotton from drowning out. The bed should be opened very shallow, with a small scooter plow: the seed should then be strewed in very thick, from three to four bushels per acre, and then covered with a board or hoe, or if in stiff red land, by running a scooter furrow on each side of the seed, and scraping off with a board when the cotton seed begin to sprout. As soon as the cotton makes its appearance above ground, it should be sided or run round with a half shovel or twister, running the straight side next to the cotton, and lapping the dirt in the middle of the row, so as to cover the first crop of young grass; the hoes should then follow, chopping out, and leaving three and four stalks in a place, a hoe's width apart, or more, to test the quality of the land; though, on ordinary land, about five inches will be the proper distance. This working is dispensed with by many planters, but a part of the committee are satisfied from trial of its advantages; it gives the plant an earlier start, by disincumbering it of the great quantity of cotton which first comes up, and which not only causes it to die, but must check its growth if suffered to remain until the first working is gone through in the usual way, which requires double the time necessary for chopping out, a hand being able to do two tasks, or acres, per day, and then the cotton will be in a situation to wait without injury, until the second working can be given, which consists in running with the plow in the same manner as at first, and drawing a little dirt to the cotton with the hoe, and thinning it to a stand, which in all cases should be only one stalk in a place, without regard to the quality of the land or the distance of the stalks apart. For the committee are of opinion that one stalk in a place would make more than two, if there was but the one stalk in an acre. The next or third working consists in throwing out the middles which had been left in the two previous plowings, with a twister, and drawing up a hill with the hoe, after which the cotton will be in bloom; any further working with the plow is always a hazardous operation, for if plowed too deep, or too close, or too dry, it causes it to shed its squares and small bolls, which is an injury that cannot be repaired, for the bolls which are substituted for those which have fallen off will be too late to mature. The use of the scraper or eagle plow, by merely scraping off the young grass without injuring the roots of the cotton, would obviate the risk of injury from late plowing, and would be a great desideratum for laying by a cotton crop, and perhaps for other purposes—though the committee have not made sufficient trial of them to speak positively.

J. N. Herndon, Chairman.

REPORT OF THE COMMITTEE ON SAVING PORK AND CURING BACON.

Your committee, after conferring together, come to the conclusion, that it would not be any thing amiss, to give some of our experiments in fatting of hogs, before we undertake to make pork of them; therefore, about the first of October, we put them in a pea-field that there is water in; if not so, minding to give them plenty, before we turn them in the field; we give them as much corn as they will eat, and then a little every day. As soon as they have ate the peas pretty well out of that field, put them into another until we wish to pen them; we then make close pens and floor them, and put them in; we shell the corn that we give them, and soak it from 12 to 16 hours. We keep salt pretty constantly in their trough. By this plan we can fatten our hogs on a great deal less corn, than to feed it dry. We kill our hogs from the middle to the last of December, which is generally a favorable time for saving pork. The day we kill we cut up and salt lightly down upon plank, which draws out a great deal of bloody water; next day we salt it over again and pack it down in tight hogsheads, minding to have every layer of meat covered well with salt, (and when we are salting, we rub the skin well;) we let it lie in salt about six weeks, we then hang it up and smoke it with green hickory wood, until we dry it properly. In the first of March, before the Skipper Fly makes it appearance, we take down the joints, and put them down in hickory ashes, (or any other good strong ashes;) the manner that some of us perform this process, is to take a large box or hogshead, sift ashes all over the bottom till you cover it, then put down a layer of hams, so as not to touch each other, then sift in the ashes, until we have filled every crack, then we take sticks about the size of a common hoe helve, and lay across in order to keep the meat separate, and so on alternately, until we have filled our box, or put down what meat we have. By this method we can preserve hams as sound and as sweet, twelve months, as they were the day they came out of the pickle.

Some of our committee have tried rubbing the joints with ground (or pulverized) red pepper, with very good success. This is done before hanging them up. All of which is respectfully submitted.

Matthaw Hall, Chairman.

From the Southwestern Farmer.

Ingleside, Adams Co., Miss., September 11, 1843.

Gentlemen—The Farmer of the 1st instant has suggested to me a few remarks—and I have an inquiry or two to make.

What means are used to preserve corn from the attacks of weevil? I find that open cribs and close cribs; the application of abundance of salt; layers of China tree leaves and branches; and gathering and storing the corn when wet enough to undergo a pretty severe sweat, have all been tried with more or less success. I was a severe sufferer last year, and am anxious to learn of a preventive.

Is the *Thumps*, in a horse, curable or not? If curable, by what means? Is it a violent palpitation of the heart? or, what is the cause of the animal's suffering? It differs from heaves.

What is the objection, if any, to a *brick* smoke house? Is it, or is it not, preferable to a frame or log building for that purpose? I ask for information—and should like a plan of a house, method of curing and smoking included. I have some suggestions to make, but will wait for farther *light*.

I find that a good table spoonful of spirit of hartshorn, given to a horse afflicted with colic, will afford instant relief. It may be put in a bottle, and water enough added to drench with. I am indebted to a medical friend for the prescription.

Much has been written on the comparative value of cotton seed as food for stock, and as manure. It seems to me a strange question. I cannot understand what would excuse a man's

using as valuable an article of food as manure, *while he has stock to feed it to.* Its good effect upon corn is astonishing, when applied as a manure—but, if it was first *passed through the mill* by the hogs and cattle, both being kept well littered in their pens, the manure would be equally good and in greater quantity—and, in addition, a large amount of pork and beef made. I have been feeding it freely to both cows and hogs, first cooking it—and I think that I have lost several hogs by it, because the careless negro *had not cooked the seed*, but merely warmed it. If properly cooked, a little corn meal or bran added, with salt and a large shovelful of wood ashes to each kettle-full, there is no danger of injury to the stock. Uncooked, sound seed I find to be very bad for cattle, sheep and hogs. There is one lady in this vicinity, whose butter commands the highest price, at all times, in the Natchez market, who has fed cotton seed thoroughly cooked, to her cows for twenty years. Some pretend to say they can discover the taste of the seed, but I think if the ashes be added, it will puzzle them to do so. The cattle must of course have an abundance of rough food besides—and the hogs must have *rooting* or *grazing* range enough, according to their kind.

You are correct, you and your correspondents, on the value of crab grass, both for hay and pasture. I had several lots plowed up early last spring, and sowed in spring oats, which have afforded abundant pasturage all summer since the oats were taken off. But for either purpose, it is a long way behind Bermuda grass. As pasture, it is almost inexhaustible, thriving best in warm, clear weather—and will feed a greater number of animals on a given extent than any other grass I have ever seen, not excepting blue grass. Dr. P., I think, saw my neighbor Col. Knight's little volunteer meadow? No pains has been taken with it. The grass came of itself, and has been regularly and closely mowed three times each year. I determined to come to a pretty close estimate of the quantity it yields per acre, on moderately good land, and accordingly measured off one-fourth of an acre of *average crop*, where the grass is well set, just before the *second* cutting this year—the first cutting having been a heavier one. I had five cocks weighed, when *thoroughly dry*—in fact it was *sold* on the ground, and weighed to the purchaser—and the average yield *per acre* amounted to 10,200 lb., or five tons two hundred weight! The third cutting will be almost as great. What crab grass or fodder-pulling will equal this as a means of affording forage? Now, there is no mistake in the calculation. I went over the whole several times, that there might be done. Last year, Col. Knight's estimate was 6 tons per acre at a cutting. Bermuda is a close growing, fine, delicate looking grass.—When in meadow, it grows to the height of 12 to 14 inches—generally about a foot. Very frequently, when the scythe makes a cut, the grass just stands solid on the ground, as if it had been undisturbed, and has to be rolled out of the way with the foot. At one time I was afraid to introduce it on the plantations, it spreads with such rapidity, and can only be killed *by smothering*. Corn and pumpkins—oats followed by peas—or any such crop, I now find will kill it. I may add, that if any of your readers, who are subscribers to at least two agricultural papers, one of them being published in the State they reside in, have a desire to try it, I will with pleasure pack a barrel of roots and ship for them as they may direct me, if by mail, post paid. Yours, &c.

THOMAS AFFLECK.

☞ The New York Courier states that the amount of specie exported from that city to Europe this Fall is comparatively small. No silver has been shipped to England, and that taken to France will not far exceed $800,000, of which $100,000 will go by the next packet. The premium on silver has therefore declined considerably.

AUGUSTA MARKET.

Cotton—Throughout last week our market had been in a drooping state, with a downward tendency in prices. On Sunday night, however, we received Liverpool accounts to the 4th inst., per Hibernia at Boston, showing a very active demand, and very heavy sales at an advance of ⅛ to ¼d on all descriptions. This gave a new impetus to our market, and an active business has engaged dealers for the two last days, at an advance of fully ¼ to ⅜c on all descriptions. We now quote 6 @ 7½ cents as extremes—remarking that a very choice lot would command a fraction more.

Groceries, &c.—Our market is well supplied with goods, and prices range decidedly low.

Exchange continues as last reported. Central Bank money has improved, and the rate is now 6 @ 7 per cent discount. State Bonds are very firm.

AUGUSTA PRICES CURRENT.

BAGGING, Hemp	yd.	16	@	20
Tow	"	15	@	18
Gunny	"	18½	@	19
BALE ROPE	lb.	6	@	10
BACON, Hog Round	"	5	@	6½
Hams	"	8	@	10
Shoulders	"	4	@	7
Sides	"	6	@	8
COFFEE, Green prime Cuba,	"	9	@	10
Ordinary to Good	"	7	@	9
St. Domingo	"	7	@	9
Rio	"	9	@	10
Laguira	"	9	@	10
Porto Rico	"	9	@	10
Java	"	11	@	14
CORN	bush.	33	@	40
FLOUR, Canal	bbl.	5 75	@	6 50
Baltimore	"	none.		
Western	"	none.		
Country	"	4 00	@	5 50
FEATHERS	lb.	30	@	37½
IRON, Russia	cwt.	4 50	@	5 00
Swedes, assorted	"	4 50	@	5 00
Hoop	"	7 00	@	8 00
Sheet	"	7 00	@	8 00
Nail Rods	"	7 00	@	8 00
LEATHER, Sole	lb.	23	@	28
Upper	side	1 50	@	2 00
Calf Skins	doz.	18 00	@	36 00
MOLASSES, N. Orleans	gal.	31	@	35
Havana	"	25	@	30
NAILS	lb.	4¾	@	6
OATS	bush.	37½	@	50
PEAS	"	40	@	50
SUGAR, New Orleans	lb.	6	@	9½
Havana, white	"	11	@	12
" brown	"	7	@	8
Muscovado	"	7	@	9
St. Croix	"	8	@	11
Porto Rico	"	7	@	9
Lump	"	14	@	16
Loaf	"	15	@	20
Double Refined	"	12	@	13
SALT, Liverpool ground	bush.	45	@	50
" "	sack	1 75	@	2 00
STEEL, German	lb.	15	@	16
Blistered	"	8	@	12½
TWINE	"	20	@	25
TEA, Behea	"	50	@	75
Souchong	"	60	@	75
Hyson	"	80	@	1 25
Gunpowder	"	1 00	@	1 25

CONTENTS OF THIS NUMBER.

	PAGE.
The Preparation and Use of Manure, continued	169
Geological Definitions; Remedy for Bots	171
Curing Bacon; Letter from Mr. Ernest	172
Smut in Wheat; Clearing Land; Cure for Swiney	173
Fattening Pork; Bommer's Manure Method; the Horse;	174
Culture of Cotton; On Saving Pork and Curing Bacon; Weevil in Corn, &c.	175

GARDEN AND FIELD SEED.

A GENERAL assortment of fresh and genuine GARDEN and FIELD SEED, among which are the following:

Red and White Clover,
Blue and Green Grass,
Rye and Orchard do.,
Timothy and Herds do.,
Millet and Lucerne do.,
Seed Corn of every valuable variety,
Seed Wheat,
Buckwheat and Potato Oats,

Kept constantly on hand by the subscriber, all of which are offered for sale at very moderate prices. All orders, by mail or otherwise, executed with neatness and despatch.

WM. HAINES, Jr.,
No. 232 Broad street, Augusta, Ga.
August 30. 18-tf

TURNEP SEED.

A SUPPLY of the following varieties of fresh TURNEP SEED just received, viz:

Yellow Sweedish or Ruta Baga, very fine for stock,
Large Globe Turnep, } Fine
" White Flat do. } for
" Hanover or White Ruta Baga do } table
" Norfolk do. } use.

For sale in quantities to suit purchasers, by
Aug. 30 18-tf WM. HAINES, Jr.

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THE undersigned is the Agent of Messrs. Abbett & Co., for vending rights to individuals for making and using the above named Manure. By reference to the following advertisement of Messrs. Abbett & Co., the prices may be ascertained. All orders addressed to me, *post paid*, at Sparta, Ga., will receive prompt attention.
Aug. 30. 18-tf R. S. HARDWICK.

THE BOMMER MANURE METHOD,

WHICH teaches how to make vegetable manure without the aid of live stock, in from 15 to 30 days, by a course of humid fermentation set into action at a cost of from 50 cts to $4.

And also to make Compost *in a few days.* And how to make a rich fertilizing liquid called "purin," having all the strength without the acrid qualities of urine.

With the view of graduating the cost to the quantity of land upon which it may be desired to use the method, the following scale of prices has been adopted, viz:

For Gardens of any extent $6
Farms up to 100 acres 10
" from 100 to 200 acres 15
" " 200 to 300 " 18
" " 300 to 400 " 20
" over 400 acres in any one farm 25

By the remittance of the sum here specified, a copy of the method will be sent by mail or in any other mode proposed by the purchaser.

All letters of inquiry must be post paid.
ABBETT & CO., Baltimore,
Proprietors of the patent right for the Southern and Western States. aug 16

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INDIAN CORN.

Extracts and hints from the "Report of the Committee on Corn," appointed by the "Planters' Society of Fairfield district, South Carolina." JON. DAVIS, ESQ., *Chairman.*

"*A proper selection of seed corn*, is regarded an object of great importance; because as in the animal, so in the vegetable kingdom, "like produces like." Every species in creation (the which is procreative) may be improved in quality and fruitfulness, by a judicious choice of breeders; the converse of the proposition holding equally good. Twin corn, like the twin ewe, is most apt to produce twain.

"*The varieties of Indian Corn*, may be summed up in two general classes, viz: the gourd seed and the flint corn; the first called the gourd seed, because of its similitude in shape to the seed of the large gourd---and the flint, so named, because of its flinty hardness. Amongst these two general classes, there are varieties of color---white, yellow, purple and mixed colors---all of which may be crossed, or amalgamated, by the deposit of the farina or anther dust from the tassel of one plant, upon the ear and stalk of the other species.

"*The seed intended for planting*, should be not only of the most proplific and best species, but also well matured.

"There is no doubt that the selection of seed is a desideratum in the growing of all plants.

"A query for consideration arises--*which is the most profitable to the planter, the gourd seed or flint?* It must be admitted that the flint is the heaviest, according to measure, and contains more nutritive matter; but it is equally certain that the gourd seed will measure most from the acre, with equal advantages otherwise, and sufficient too to make up more than the loss o weight. Admitted, however, as an hypothesis, that this should not be realized, your committee on other grounds, would give the gourd seed a decided superiority.

"*It is more easily ground into meal:* thirty bushels of gourd seed would be ground with as much ease as twenty-five of the flint. It is more digestible, horses and hogs masticate it with less difficulty.

"It is observable, that the Indian corn is most peculiarly adapted to certain climates and soil: it is generally admitted, that the gourd seed corn will finally change into flint corn, if cultivated for a few years in the low country of South Carolina; and it is also admitted, that the same quality of lands will yield more corn in North Carolina or Tennessee, than in South Carolina.

"Your committee, in thus contending that the flint is a degenerate corn, would merely add, that if the grain arrives at higher perfection in some climates north of South Carolina, it would be advisable to procure seed from thence—provided the due attention had been given to its improvement.

The following plan has been advantageously pursued by the compiler and several of his friends, viz: before harvesting your crop, select from the most healthy and best bearing stalks the lowest ears, these gather with the inner husk on, or as it is called, slip shuck, which place carefully away in a safe place, until the season for planting, then take off the shuck and expose the ears (for a day or two before you shell them,) in the open air or sun, and to every three pecks of flint corn, mix one peck of the large, white grain North Carolina or Collins' corn. This will give you a cross between the flint and gourd seed, and a grain much admired by every planter who has seen it. It will degenerate every year, and finally become flint corn; to prevent which, the gourd seed should be mixed with it every other year, if it can be conveniently procured; but certainly every third year.

"*The best time for planting.*—The sooner we procure a stand, the more sure the crop, particularly in uplands. In low lands, subject to be overflowed, it will be unsafe (on account of spring freshets,) to procure an early stand. Corn planted in March, in general, has the advantages of the spring seasons and dews.—Whatever the reasoning may be, the experience of the intelligent planter will testify, that in three years out of four, March corn will produce the most abundant and perfect grained crop.

"*The late corn is liable* to run up tall and slender, bearing therefore smaller ears.. Independent of the advantage of a more abundant crop from early corn, it is an object to have the corn crop laid by soon, to enable the planter to look well to his other crops. Besides, it suits well for the pea crop.

"A third consideration is, *the composition and fertility of the soil.* If too much clay, (and if old land,) in a few days after a rain, it becomes too stiff for the plow, and too close for the roots to penetrate; if too sandy and porous, the strength of the soil quickly evaporates, leaving the roots of the corn too much exposed to the action of sun and air, in the heat of summer; if of a sandy bottom, as well as surface, the little strength of the soil both evaporates and sinks.

"It is better economy to pay soundly for a fine grit surface, and clay subsoil, (the land being level,) for ten years use, than to cultivate a stiff clay, or coarse sandy land, in corn, *free of charge.*

"A fourth consideration is, *the preparation of the ground*, and best plan of planting. All old lands are the better prepared, by being plowed and open to the winter freezes; and all plowings should be deep and close.

"In planting it may be expedient to put in seed enough to accommodate birds and squirrels, and still have a stand left; it is much better to thin out five plants, than to replant one.

"*If the stand is very bad*, it will be safer to plow up and plant over again, than to replant, unless the replanting is done in time to tassel with the first planting." NOTE.—Every planter must have observed, that in a field of corn where there are two different plantings, as soon as the first planting begins to tassel, the latter, though perhaps not as far advanced in growth as the first, also immediately begins to shoot out and tassel; no doubt it is caused by the farina or anther dust of the former falling on the stalk and leaves of the latter.—*Compiler.*

"*What is the best distance?* is the fifth interrogatory in planting corn. This must be varied in different climates and soils; not so apt to fire in cold climates, it will there warrant closer planting. On uplands, and in the hill, with one stalk, four by three feet; if two stalks, five by five feet.

"The sixth inquiry is, *the best plan of manuring corn ground.* It would be lucrative in every sense, to manure corn hills without exception, whether the lands are old or new; if new lands are manured, their productiveness is increased in the same proportion to old lands fertilized, and the planter is remunerated tenfold for his labor. To manure corn lands, open deep with the plow, (*or hoe,*) plant five grains in a hill, cover *lightly* with the hoe, (and if stable or yard manure, one handful,) follow after with a plow on each side, so as barely to make the mould or earth to meet over the manure. This will, on the whole, make a deep cover, but the manure will prevent the earth baking over the corn, so that it will still come up.

"If the manure is not thus covered, (especially cotton seed manure,) its value is lost by evaporation.

"*The plan for cultivation* is the seventh consideration. When the ground is in good order the two first plowings should be ever very deep and close. This will cause the earth to retain moisture in summer, and the roots of the corn to run deep in the outset, so as to prevent the plow from cutting them too much in the after plowings, which should be shallow.

"*In the production of corn*, let this be a rule—*deep* plowing in the *spring*, and *shallow* in the *summer.* Corn should be tended fast; that is to say, the plow should go over the ground every three (never less than four) weeks. It is in the very nature of the soil, that in its cultivation, it should be stirred often; it should be turned to the sun and atmosphere. If the ground is not *constitutionally* hard, it is never too dry to be plowed, but easily may be too wet.

"Many destroy the present crop *by one plowing where the ground is too wet;* and unless the earth *pulverises* or *crumbles* as the plow breaks up, *it is too wet.* When the ground is plowed too wet, the destructive effects are only prevented when a shower of rain falls before the sun dries the earth.

"*Two hoeings are necessary only* in a crop of corn; a light moulding after it first comes up, and a flat hill when laid by; four plowings in poor ground and three may answer in rich ground, if the corn makes with rapidity. *The last working in rich ground* should be when the corn tassels. To cut the roots when the corn is shooting, checks the growth, thereby preventing the tassel from emitting the farina, and thus impedes the fecundation in the shoot or ear.

"The eighth process of the corn crop is, *to gather the blades for fodder.* By gathering the fodder before the *milky substance* has become calcareous, many planters prevent the ears from maturing, and certainly loses much of its saccharine and oily matter. In gathering fodder, never stop for clouds; to observe them not unfrequently insures a loss of fodder.

"The ninth and last process *is gathering the corn.* Corn may be also prematurely gathered; producing, when gathered in this way, a withered and shrivelled grain; this process should never be undertaken till the stalk has become dry."

If you intend keeping your corn any length of time, let it be harvested in the slip shuck.

Holmes' South. Farm.

The celebrated vine at Cumberland Lodge in Windsor Park, (Eng.) supposed to be the largest in the world, now contains 2,350 bunches of grapes, each averaging one pound weight. Its length is 138 feet, width 16, and it extends over a space of 2,200 superficial feet. It has been planted forty years.

MANAGEMENT OF CATTLE.

Having made some remarks in the August number of the Agriculturist, in reference to the different breeds of cattle, we call the reader's attention this month to selections for particular purposes and general management.

For milkers, select as large cows as can be found possessing symmetry and neatness of head and limbs. The hair should be soft and silky to the touch, and skin loose. It is a matter of more moment, than is generally supposed, that milch cows have a pleasant temper. An ill-natured beast, *ceterus paribus*, will not give so much milk, and even what is obtained will be taken with difficulty, and without great cautiousness she will "dry up" sooner than one of moderare docility.

In the selection of a male, great size is *objectionable*. There is no a greater error with farmers than the supposition, that a large male crossed upon small cows will improve the breed fastest. There are many objections to a very large bull. They are usually coarse, and difficult to keep fat, and their offspring from small cows are generally more ill-shapen than themselves, and are uniformly meagre, raw-boned, uncomely creatures. There are substantial reasons for this result. The produce of externally large aaimals while in *utero*, are not fully nourished by small cows; there is frequent difficulty in cows being delivered of very large calves; then they always come poor, and, in the last place, they require such a quantity of nourishment, that few small dams supply their wants. The most compactly built, firmly muscled, flinty horses of the world have not been produced by large sires, but they are the produce of the little Arab, upon dams of larger size.

In breeding it is a rule, from which there is perhaps no variation, that "*the male gives form and the female size.*" Hence the conduct of the most scientific breeders of England. Their object is to find a bull rather under than over size, with full points and perfection of form; and experience teaches, that we can find at least twenty heifers of suitable dimensions for breeders where we can find one bull which should be selected. The indispensables for a good breeder are, first, let the animal be of the *deepest* milking stock; second, medium size; third, small bone; fourth, full points; fifth, glossy hair; and sixth, soft loose skin.

In Durhams, select an animal without a *black* hair or muzzle, and by all means, have him of good disposition.

The next consideration is, to manage matters so that the calves shall be dropped about the 1st of April. July is the proper month for the cows to go to the bulls.

Difficulty in Calving.—It is not at all unfrequent that cows cannot bring forth, and by neglect we have known valuable animals die in this condition. Sometimes the cow is too feeble for the laborious exertion, and again, the calf is extremely large; in either case a little gentle assistance will relieve both dam and offspring. If the feet have made their appearance, examine if the head is between the fore legs. If it is, all will go on well, but if the head is turned, take off your coat like a gentleman and christian, roll up your sleeve to your shoulder, and insert your hand, and turn the calf if necessary, or the head forward. Then take hold of the fore feet with both hands, and as the suffering dam exerts herself, pull gently, and in nine cases out of ten the cow will be delivered in less than ten minutes.

After Calving.—Let the calf suck all it will the first day, but at evening have the cow milked perfectly clean. When the calf is two or three days old, separate the dam from it, but let them together three times a day. By all means the calf should be kept fat, and when about two months old, if properly managed and taught to eat, it should be weaned. But unless the calf receive rich food at this age it will decline, and become so stinted in its growth as never to recover from it.

In winter, calves should have a shelter, and be fed carefully. The cheapest mode of rearing any animal is to keep it always in good condition; and in this no farmer can be successful without constant personal attention. Rules are too limited to make a good manager of stock; still they oftentives materially aid. Every husbandman should be one of thought, diligence and punctuality.

Attention to Milch Cows.—Any one who would conclude his cows are so superior as to give an abundance of rich milk without the requisite food and attention, will be much mistaken, and it a man of feeling, mortified at his "ill luck" from bad management.

In winter the first study should be comfortable quarters for milkers. A cow-house is indispensable to prosperous husbandry and good living. Each cow should have her stall and be taught to go to it, and stay in it, for her meal. It is not so important to feed superabundantly, as it is to give what is to be consumed regularly. Man learns by experience that his regular meals, of proper quality rather than large amount, are essential to sound health—the same holds good with all domestic animals.

Green food is very important in winter for cows. If this cannot be obtained by the way of pasturage, roots, such as potatoes, turneps, beets, &c. will answer the purpose admirably.

Cooked food is better for cows than uncooked, and less will answer a better purpose. Currying cows in winter is essential to good health, and it materially increases the quantity of milk. This may be done with very little labor twice in the day. Cows should have good hay or rough food of some kind at all times, and regular supplies of water cannot be neglected with impunity, and daily salting is just as necessary to the cow as to her master.

Milking is not the most unimportant matter. Women were not made to manage cows, and an ill-natured man should not enter a cow yard. Let an active, quick moving, attentive man, feed, milk and manage the cows. The good old Yankee plan is for the husband to *make the fire, bring the water*, and "*pale the cow.*" while the wife sweeps the house and gets the breakfast, and really we should like to see the system adopted in the Southwest.

Milking should be performed briskly. A slow, lazy person, tugging slowly at a cow's udder, puts the kind creature so much out of patience that she holds up her milk and soon becomes dry. We advise our friends to saw off the points of their cow's horns, to prevent hooking injuriously, and by a little management with cattle while young, they will become fond of their managers, and afford much pleasure to all of sound cowish refinements to attend to them.

Last, but not least, in managing cattle, is to keep the stables clean. The cleaning should be done once a day, where the cow stands up at night, and if they are in the stalls through the day, cleaning should be done morning and evening. Let each cow have a soft straw bed for lying down.

These, to some, may appear small matters, but if our readers who have not adopted this or a similar course, will try it the coming winter, and are not amply remunerated for their extra attentions, we will confess we have written to little purpose.—*Tenn. Agriculturist.*

APPLE BREAD.—A French officer has invented and practiced with great success, a method of making bread with common apples, very far supurior to potato bread. After having boiled one-third of peeled apples, he bruised them while quite warm into two-thirds of flour, including the proper quantity of yeast, kneeded the whole without water. the juice of the fruit being quite sufficient. When the mixture had acquired the consistency of paste, he put it into a vessel, in which he allowed it to rise for about twelve hours. By this process he obtained very excellent bread, full of eyes and extremely palatable and light.

EXPERIMENTS AND OBSERVATIONS ON THE PRODUCTION OF BUTTER.

At a late meeting of the Highland Agricultural Society of Scotland, a paper entitled "Experiments and Observations on the Production of Butter," by Pro essor Traill, was read by the author. These experiments were made in connection with the late Dr. Gerard, of Liverpool, who had paid much attention to the subject, and assistance was occasionally given by Dr. Bostock, now in London. The experimenters had a dairy of four, sometimes five cows at their disposal; but after numerous preliminary trials, they found that the numerical results, on the quantity of the butter obtained, were most uniform and satisfactory, when each experiment was made on a few pints only. The process could thus be carried on in glass vessels, which enabled them to observe the progress of the operation, to collect the produce more carefully, and use a more delicate balance to ascertain the weight of the butter obtained. This likewise enabled them to make the comparative experiments on the same milk on the same day, a point regarded as of essential importance, as the richness, even of the same cow's milk, is liable to vary considerably from day to day, according to the nature of her food, her health, and possibly, too, according to the state of the weather. The time which had elapsed since the last calving, was also found to have much influence on the quantity of the butter. The quantity of butter was smallest, and the proportion of cheesy matter greatest, just after calving; and generally speaking, the milk of those cows which yielded the *least* quantity, was richest in butteraceous matter.

One of the principal objects in view, was to ascertain the comparative advantages of churning:

1. Sweet cream alone.
2. Sweet milk and cream together.
3. Sour cream, or that slightly acid.
4. Sour milk and cream together.
5. Scalded cream, or what is called *clotted* cream, as practised in Devonshire.

The principal results of the experiments are the following:

1. That the addition of some cold water during churning, facilitates the process, or the separation of the butter: especially when the cream is thick and the weather hot.

2. The cream alone is more easily churned than a mixture of cream and milk.

3. The butter produced from sweet cream has the finest flavor, when fresh, and appears to keep longest without becoming rancid; but that the buttermilk so obtained is poor and small in quantity.

4. That scalding the cream according to the Devonshire method, yields the largest quantity of butter, which, if intended for immediate use, is agreeable to the palate, and readily saleable, but if intended to be salted, is more liable to acquire, by keeping, a rancid flavor.

The process of scalding is troublesome, and the milk, after the removal of the cream, is poor, and often would be unsaleable from the taste it has acquired from the heating.

5. That churning the milk and cream together, after they have become slightly acid, seems to be the most economical process on the whole; because it yields a large quantity of excellent butter, and the buttermilk is of good quality; a point of some importance, where buttermilk is largely used as an article of diet, as it is in Lancashire.

6. That the keeping of butter in a sound state, appears to depend on its being obtained as free from uncombined albumen, or caseine and water, as it can be, by means of washing and working, when taken from the churn.

The author mentioned the interesting fact that, in the course of his experiments, he found when sweet milk and cream were churned together, and though cold water was added, after an hour and a half, and then after three hours' churning, not a particle of butter was obtained.—*Plowman.*

RULES FOR IMPROVEMENT IN BREEDING STOCK.

The rules for breeding all kinds of domestic stock, whether the horse, the ox, the sheep, or the pig, are very simple; the judgment, however, required in making selections and coupling animals together, with a view of *continued improvement*, can only be acquired by persons possessing an innate talent for the thing, and long personal experience in its practice. Still, every one who is disposed may effect something, and for their guide we merely give in a few words the long adopted principles of the most eminent breeders of domestic animals.

1. When better materials do not exist, or the person wishing to make the improvements has not the means of going abroad for so doing, choose from the *best natives* at hand for this purpose.

2. But when it is possible to do so, obtain *thorough-bred* males of the proper kind from superior improved stocks, to cross on to the native females, and so continue breeding up the grade females to the thorough-bred males.

3. Be very careful in a thorough-bred stock to use no male which is not at least *equal* to the females, and if he can be found *superior*, so much the better, for this will ensure still further improvement, if possible, in the progeny.

In various communications to the agricultural journals for the past five years, we have repeatedly urged on the farmers of our country the practice of the first and second rules above; for in following them, great and decided improvements may be made at a very cheap rate. What our countrymen most fail in, except in New England, where the beautiful reds predominate, is a want of *uniformity* pervading their stocks. Animals look much better together when they match; that is, that all shall be as near alike as possible in size, in shape, in color, in their horns, and in their *general* expression. Thus formed, they reflect a beauty on each other; and although they may command no particular attention single, yet as a body they will excite respect, and if pretty good, not untrequently admiration; for they denote at least, that there is an established system in their breeding. In Europe these incongruities do not so generally prevail. In one district, the traveller observes that the animals are nearly all black, *without* horns; in another, they are uniformly the same color, *with* horns; a few miles beyond, and we find them suddenly changed to a pure red; again, they may be white; and further, they appear in mixed colors, though still preserving a uniformity, as in the case of the Italian, Swiss, Dutch, Jersey, Ayrshire, Hereford and Durham cattle.—*American Agriculturist.*

PREPARATION FOR WINTER.

With farmers it is important to have all necessary preparations for the hard weather that is approaching. It is as essential to save crops as to make them, and too often it is the case that gathering is delayed too long. Corn after maturity loses daily till housed.

Sweet potatoes should be put away before frost, and Irish potatoes are liable to injury after the cold sets in. Above all things, have preparations to shelter stock of every kind.—Milch cows cannot be kept in good condition without protection from the pelting storms, and they will not give half the milk.

An open shelter, with a southern exposure, is easily constructed and answers an admirable purpose. Sheep should have shelters where they can escape the cold rains, and lie down on dry places.

Hogs are the better to have protection from the rain. Care, however, should be taken that their sheds be kept free from wet straw, corn husks, or any thing that will induce diseases of the skin. It is important that their apartments have all the dust and litter scraped out every few days.

The secret of having stock in good condition through winter is to have them fat at the start, and then commence feeding early, and be sure that they have regular attention and are not suffered to fall off. One good animal well attended is worth more than two inferior ones neglected. A fat, strong farm horses will do more work than two feeble, poor animals. Keep no more animals than can always be in condition, is the secret of success, and it is to be regretted few adhere to this rule.—*Tenn. Agr.*

PRESERVING SWEET POTATOES.—We copy the following method of preserving potatoes from the American Agriculturists' Almanac:—

Select a dry place, level the earth, and lay a bed of dry straw so as to form a circle of about six feet in diameter. On this straw pile up the potatoes until they form a cone four or five feet high, over which spread a little dry grass. Then cover the entire cone with corn-stalks set up endwise, with the buts resting on the ground, and the tops reaching over the apex, of a sufficient thickness to conceal all of the potatoes. Then cover the whole pile with earth at a depth of at least a foot, without leaving any air-hole at the top, as is frequently done. A small shelter should then be made so as to prevent the rains from washing off the earth. This may be done by inserting in the ground about the pile four forked stakes, on which rails may be placed to support the covering, which may consist of boards, bark, thatch or other substances. Potatoes can be preserved in this manner until June, nearly as fresh as when first put up.

WILKES AGRICULTURAL SOCIETY.—The exhibition of stock by this Society last Friday, though not to be compared with similar exhibitions in other parts of the country, was yet most gratifying, as giving evidence of the increasing interest our people are taking in such matters, and we sincerely hope that these small beginnings may result in great and permanent benefits. It is by the operation of such associations that their exhausted lands are to be revived; that the disastrous spirit of emigration which has desolated this county, (called *old* Wilkes, though it has not yet been settled a century,) is to be checked; that improvements in agriculture are to be discovered and brought into use; that our people, the produce of whose labor has gone to pay strangers for their meat and bread, are to be made independent; that our citizens are to be taught to enrich and beautify the heritage of their fathers, and, by preparing for their children a home worth loving, lay the best foundation for love of country in their hearts. It is our ardent desirs to see such associations multiply and prosper, to see at least one such in every county, and every farmer a member of one.

The next Annual Fair of the Society will be on Friday before the fourth Monday in October, 1844.—*Washington News.*

SAVING SEED CORN.

Very few planters have paid that attention to the selection of seed for planting, that their own interests demand. It is a principle of vegetable as well as of animal life, that "like produces like." Every one who raises good stock, is not only aware of the truth of this, but he carries it out in his selections of animals to breed from. He selects his finest calves and pigs, and saves them from the slaughter pen, because, being well formed, large and thrifty, he believes that their offspring will possess these qualities. But although the same thing is true in the vegetable kingdom, he seldom thinks of availing himself of the advantage of a judicious selection in his seed for planting. Some few have tried it, and by care, and a judicious selection, year after year, have brought their corn to a high state of perfection; and their neighbors, seeing their success, have eagerly sought these improved seed. It would do well the first year, but after that gradually deteriorate to the common standard, and the whole thing would be pronounced a humbug. The humbug, however, was not in the original improvement, but in the subsequent neglect. The improver commenced by carefully selecting from his field those stalks that bore two fine, large ears, and laying them carefully aside for planting. The next year he selected with as much care from the product of his former selection; and by keeping up this system, reaped each year a richer harvest.—Whereas, the other, who commenced with his neighbor's fine seed, by gathering indiscriminately into his barn, and selecting his seed from the mass in the spring, would be as likely to get the ears from an inferior as from a good stalk, and thus his seed would, by a law of nature, deteriorate to the common standard.

We believe that it is perfectly practicable to have almost every stalk bearing two good ears, on land where but one would be produced according to the usual method of selecting seed. This is not a mere opinion. It has been tried repeatedly, and with enti e success, by various persons. What has been called the Dunton, the Cook, and the Williamscorn, have all owed their celebrity to the judicious selection of seed for a series of years, by the respective gentlemen whose names they bear. True, it requires some little trouble to select every year; but every planter should have enough of professional pride in improving his system of husbandry, to take the necessary trouble, especially when he is so richly repaid by an increased harvest.—*Columbia Planter.*

MANURE.—No farmer can imagine, that has not tried the experiment, what a prodigious quantity of rich, vegetable and fibrous earth may be collected from corners and by-places that lie out of the way of cultivation, and which, from their retired position, have perhaps never so much as attracted his notice. All such refuse trash, and fibrous earths and weeds, by being conveyed to his barn-yards, at intervals, during the fall and winter, and judiciously combined with its contents will be converted into a rich, fertilizing and durable manure, merely by absorbing and retaining *that excess of putrescent fluid and effluvia* which is otherwise lost by filtration and evaporation; that is, by soaking away and drying up.

TRANSPLANTATION OF ORCHARDS.—Those who have not already on their farms a good orchard, it may not be inopportune to remind, that as soon as the leaves fall, will be the proper time to plant out one, and that as the planting of an orchard is a thing which ordinarily occurs but once in a life time, that all possible pains ought to be taken both in the preparation of the ground, the selection of the trees, and the method of setting them out. The ground should be deeply plowed, and subsoiled if possible, and should be either limed, marled or ashed. None but the best fruit should be selected; pains should be taken in planting the young trees, to make the holes large, and after *covering* the roots with the earth taken out of the holes, to fill up with a mixture of the earth taken out of them and some good, rich compost, made either of mould, ashes, the scrapings of the road, or thoroughly rotted manure, and to drive a stake down by each tree, as set out, to prevent disturbance by the winds. In putting in the young trees, all ragged or broken roots should be smoothly cut off, and the remaining ones regularly spread out.—*American Farmer.*

CURE FOR SPAVIN.—A correspondent of the Albany Cultivator gives the following as a cure for bone spavin, in its first stages, if properly applied:—"Add to two table spoonsful of melted lard one of cantharides, made fine or pulverised, and a lump of corrosive sublimate, pulverised, as large as a pea—all melted up together, and applied once a day till used up, confining it to the callous. This quantity is for one leg, and may be relied on as a cure. It will make a sore, and the joint will be much weakened while applying the medicine. No need of alarm; it will all be right when healed up."

FAME.—Fame is like a shaved pig with a greased tail; and it is only after it has slipped through the hands of some thousands, that some fellow, by good luck, holds on to it.

From the Farmers' Cabinet.

TO HAVE GOOD CROPS.

Farmers are apt to place too much dependence upon manure, supposing that if they apply that in sufficient QUANTITY nothing else is required of them. This error is not, of course, of equally evil tendency to that of using no manure at all; but I was almost ready to say it was not very much less so. If the soil be not properly prepared for its reception, and if the manure be not properly *made*, *preserved* and *applied*, it will matter little whether the "manure heap" resembled a mountain or a mole-hill. But it cannot be expected that the minute details of all the practice involved in all this, can be given in the space afforded by any periodical. One great point is to cultivate no more land than you can cultivate well, both as to labor and manure. If you have more land and less money and labor, than you can use with full effect, turn a portion of land into money by selling it, and apply the proceeds to the improvement of that retained. Thus reduce the size of your farm to the capacity of your efficient forces—labor and money—instead of trying to extend your stinted forces over too wide a surface, and thus weakening them and destroying their efficiency. The second principle is, to put your soil into good condition, by *liming*, *deep plowing*, *manuring*, and correcting its proportions of clay and sand when practicable. All land, in my opinion, will be greatly benefited by the application of lime.—Some requires more, some less, to produce the same results, but all lands require it as a constituent of the soil. You will find lime most active on red lands, but it is useful on all lands. *Deep plowing* is, in my opinion, essential to successful farming. If you have a thin soil, by deep plowing, liming and manuring, you will in a very few years, secure a deep soil. Even though you do turn up a portion of blue clay with your four-horse plow, don't be frightened at the sight of it. It is better to have blue clay mixed in a *deep* soil, than a hard pan of it under a thin one. But if you find too much clay thus turned up, correct its stiffness by carting sand upon it, and mixing it with the clay. A cart load of sand is often of more value to a soil than the same quantity of manure. Reverse the process, if any portion of the land be too sandy—carry clay to it, and thus stiffen it.

The advantage of deep plowing is almost incalculable. It will ultimately make a deep soil, and a deep soil is essential to a good crop in a dry season. The roots of the plants strike deeply into it, instead of spreading out horizontally near the surface, as they are compelled to do in a thin soil, and are thus secured from the effects of drought. The rain sinks into a deep soil, and is thus preserved to the uses of the crop; while in a thin soil, it runs off, is soon evaporated, or stands on the surface, doing little good in the former cases, and absolute injury in the latter. I should not only plow deep, but I should follow in the furrow of the four horse plow with a good substratum plow, and this with the liming, judicious manuring and proper rotation, I should calculate upon as my security for a good crop, always. I believe this practice to be not only the best preventive of winter-killing and injury from drought, but also of injury from the fly. By this practice you secure a robust constitution to the plant, and, of consequence, thus enable it to withstand, without harm, the pressure upon the sap vessels occasioned by the flax-seed pupa of the fly, as it becomes embedded in its surface. In illustration of the good effects of deep plowing, I will refer to the practice of *garden culture*. Who ever doubted that deep spading—even two or three spits deep—was not only useful, but necessary to success? And in what does a garden differ from a farm? In size—nothing else.

Manure cannot always be obtained, nor can enough be made by every one for the whole farm. But a vast amount may be obtained and made, more than is now usually done. By a little management, the manure now made may be increased in value, without increase of quantity. Properly constructed manure pits should be prepared, with shed roofs to protect their contents from the effects of rain and sunshine. All manure should be deposited in the pits while *fresh*—before the rain has washed away its salts, or the heat of the sun evaporated its volatile principles. Every kind of vegetable and animal offal should be thrown into the manure pits. The pits should be so situated near the barn or under it, that they would receive the urine of all the animals. There should be two pits, that the contents of one might be digesting, while the other was receiving materials. The mode of preparing the manure, time of applying it to the land, the quantity to be applied to the acre, the mode of application, &c. &c., are, and of necessity must be, left to the discretion of the farmer. There is, however, one kind of manure that I think is too much neglected, and it is often the only one that can be made available. I allude to turning in green crops. Turning in a clover lay for this purpose, is common enough; but I think the object may be attained more quickly by turning in crops of corn sown broadcast. Two, if not three crops of corn, could be grown and turned in, in the course of a season. That this kind of manure should afford all the benefit of which it is capable, the land should have been previously limed; or, if not previously done, a good dressing of lime should be turned in with the young corn.

General principles suit all, and the details of their application must be varied to suit each particular case. In conclusion, theoretical knowledge is invaluable to a farmer, as it is to all other professions, but it requires practical knowledge, intelligent perseverance, and untiring industry, to carry out its principles and produce their full effects.

GIDEON B. SMITH.

From the Columbia Planter.

FAIRFIELD DISTRICT, Sept. 12, 1843.

Dear Sir—The labor of the manuring system consists in the accumulating process, and the transportation and distribution. The first I regard as a mere bagatelle, compared with the latter, owing to the interference of the peculiar system of agriculture pursued in this district; one which, while I dislike it, I cannot discard. As my chief opposition to it grows out of its conflicting with my manuring operatins, it will be relevant to my subject to explain my objections in the course of my remarks; and this I shall do in the hope that some one of your patrons, more inventive than myself, may be able to obviate my difficulties.

I have a cow-house, 100 feet long by 25 wide, which stands in the midst of an enclosure 150 feet by 75. A part of the house is divided into stalls for milch cows; another portion is cut off for calves, and the rest is left open for the *ignobile vulgus*. Each division has its proportion of unsheltered area, so as to obviate the evil of personal rencounters, which would necessarily grow out of too close contact. The loft is floored in its whole extent, and affords ample room for a sufficiency of shucks. As soon as my "pen" is emptied in the early part of the spring, I recommence to "trash it," and for that purpose I employ two tilt-carts, each with an appointment of two boys and a woman, in conveying leaves from the woods. The former load and drive, the latter rake. I do not use hoes in collecting the leaves, but rakes with open teeth, less I impoverish and expose the earth, so as to cause the trees to die. My carts are supplied with high moveable frames, formed of light laths, to enable them to carry a quantity consistent with the trifling weight of the material.—When I have covered the area of my pen with one layer of leaves closely placed, I level them, clean out my stables, which have been also "trashed" from time to time, and distribute the contents over the whole surface. I then hasten to cover over the whole pen with another layer of leaves, so as quickly to exclude the stable manure from the sun. I also re-litter my stables promptly, for it is essential, in my opinion, to have a layer of stable compost to intervene the successive strata of litter from the woods. In the meantime, too, my cattle are nightly collected in the pen, and are fed on shucks and straw, which are daily thrown into racks that run through the centre of the house.

Thus I go on till necessity compels me to remove my mules from the cart to the plow. In the past and several preceding seasons, as soon as my crop has been planted, I have again started one cart, two boys and a woman, at the trashing of my pen, and the removal to it of the compost from the stables. Always in the latter part of July, I start another cart, properly officered, and keep them both steadily at the work till the wasting of my cotton in the fields compels me to reduce my "trash force" to one-half. In the month of September, I usually make a pen in a neighboring field, which is "resting," and which I wish to manure the next year, and trash and pen my cattle upon it till the commencement of winter. As soon as my cow-house pen is thus abandoned, I employ all my wagons, and as many laborers as are necessary to keep them in incessant motion, in removing the deposits from it to what I call my "manured field," one which I have nourished highly and worked hard for many years, and which, like a well trained gladiator, improves gradually under the treatment. The compost thus carried into the field is thrown into a conical heap, in a central position, and covered with "raw trash" or straw. I now suffer the surface of my cow-house pen to dry and indurate, ready for the new crop of leaves, otherwise it becomes wet, soft and boggy, in winter.

In winter I recommence to trash it, and desert my "fall pen." I now have my main stock of manure deposited in its proper field, and my "fall pen" perfected in my fancy field of the year; and I consider the first process of the system complete. All this I have regarded as nothing—but now comes the real difficulty.

In find, Mr. Editor, that I shall have to divide my subject into three parts; the first embracing what I have already written; the second the transportation and minute distribution of the manure; and the third, its effects. To each of these heads I will devote a chapter, and I therefore close my regular treaties for the present; but as my paper is not filled, I will indulge myself with a short digression.

If you feel a curiosity to ascertain how little the generous soil of Fairfield has been requited for her bountiful production, visit her, and take an inventory of the rakes, horse-carts, and well littered cow-pens and stables, to be found within her borders; and observe how the food her fields so much crave is suffered offensively to cumber and pollute the lanes which lead to the dwellings of her improvident and ungrateful inhabitants. The offence to your olfactory nerves would be lost in your sorrow that you had found an illustration of the fact, that pearls are sometimes cast before swine; for a thing unclean in itself may be rendered "a jewel" by its usefulness, and the "lords of creation" may remain as unwise as "the beasts of the fields," by their neglect of reason, the attribute of man. I take this censure as freely to myself as I bestow it upon others, for I have left undone much more of what I know to be practicable, than I have accomplished.

Yours, &c.

FARMINGTON.

CHICKEN HATCHING.—Some enterprising persons in Brooklyn, L. I. have established an Institution in that city for the purpose of hatching chickens on a large scale, which is dignified with the name of Polotokion. It comprises five or six long buildings, and several acres of land.

They have a similar affair in England called the Eccaleobeion, which is in successful operation and turns out one hundred chickens a day. The practice has long prevailed in Egypt, and recently has been introduced in France. Reaumur, we believe, first succeeded in raising chickens by means of the common oven. The modern aparatus consists of a series of flues sup-

plied with hot water. A good deal of care is necessary in raising the *youngsters*, as they do not prove very healthy. It is said they have to be taken care of by the old hens for at least a month after they are hatched.

From the American Eagle.

Mr. Editor—The following article, which I find in an old paper published in 1797, I think will be read by many of your subscribers with interest—and I am sure that many of our citizens, both in the city and country, would be benefitted by adopting somewhat a similar course of retrenchment and reform. A Farmer.

CAUSE OF AND CURE FOR "HARD TIMES."

I profess myself to be an honest farmer, for I can say that no man could ever charge me with a dishonest action. I see, with great grief, that all the country is afflicted as well as myself; every one is complaining, and telling his grievances; but they do not tell how their troubles came on them. I know it is common for people to throw the blame of their own misdeeds upon others, or at least to excuse themselves of the charge. I am in great tribulation; but to keep up the above character of an honest man, I cannot in conscience say that any one has brought my troubles on me but myself. "Hard times and no money," says every one. A short story of myself will show how it came "hard times and no money" with me, at the age of 55, who had lived well these forty years. My parents were poor, and they put me, at twelve years of age, to a farmer with whom I lived until I was twenty-one. My master fitted me out with two stout suits of homespun, four pair of stockings, four woolen shirts, and two pair of shoes.

At twenty-two I married me a wife, and a very good woman she was. We took a farm of forty acres on rent. By industry we gained ahead fast; I paid my rent punctually, and laid by money. In ten years I was able to buy me a farm of sixty acres, on which I became my own tenant. I then in a manner grew rich and soon added another sixty acres, with which I was content.

My estate now increased beyond all account. I bought several acres of outland for my children, who amounted to seven, when I was forty-five years old. About this time I married my oldest daughter to a clever lad, to whom I gave one hundred acres of my outland. This daughter had been a dutiful, working girl, and therefore I fitted her out well, and to her mind; for I told her to take of the best of my wool and flax, and to spin her gowns, coats, stockings and shifts; nay, I suffered her to buy some cotton and make into sheets, as I was determined to do well by her. At this time my farm gave me and my whole family a good living on the produce of it, and left me one year with another one hundred and fifty silver dollars, for I never spent more than ten dollars a year, which was for salt, nails and the like. Nothing to wear, eat or drink, was purchased, as my farm provided all. With this saving I put money to interest, bought cattle, fattened and sold them, and made a great profit. In two years after, my second daughter was courted. My wife says—come, you are now rich; you know Molly had nothing but what she spun—and no other clothing has ever come into our house for any of us; Sarah must be fitted out a little. She ought to fare as well as neighbor N——'s Betty. I must have some money and go to town. Well, wife, it shall be as you think best—I have never been stingy; but it seems to me that what we spin at home will do.

However, wife goes to town and returns in a few days with a calico gown, a calamanco petticoat, a set of stone tea-cups, half a dozen pewter teaspoons, and a tea kettle—I did not feel it; and I confess I was pleased to see them; Sarah was as well fitted off as any girl in the country.

In three years more my third daughter had a spark; and the wedding being concluded upon, wife comes again for the purse; but when she returned, what did I see! A silken gown, silk for a cloak, a looking glass, China tea-gear, and a hundred other things, with the empty purse. But this is not all, Mr. Editor. Some time before the marriage of this last daughter, and ever since, this charge increased in my family, besides all sorts of household furniture, unknown to us before; clothing of every sort is bought—and the wheel goes only for the purpose of exchanging our substantial cloth of flax and wool, for gauze, ribbons, silk, tea, sugar, &c. My butter which used to go to market and brought money, is now expended at the tea-table.—Breakfast, which used to take ten minutes, when we were satisfied with milk, or porridge made of it, now takes my whole family an hour at tea or coffee. My lambs, which used also to bring cash, are now eaten at home—or, if sent to market, are brought back in things of no use—so that, instead of laying up one hundred and fifty dollars a year, I find all my loose money is gone—my best debts called in and expended—and being straightened, I cannot carry on my farm to so good advantage as formerly, so that it brings me not near so much; and further, what it cost me to live, (though a less family than heretofore, and all able to work,) is fifty or sixty dollars more than all my farm brings me in. Now, this has gone on a good many years, and has brought hard times into my family: and if I can't reform it, ruin must follow—my land must go. I am not alone; I know of thirty or forty who have gone hand and hand with me; and they all say "hard times." Now, Mr. Editor, I do not know how you live—may be you are more frugal than we are, as all used to be; but I am still master in my own house.

I am determined to alter my way of living to what it was twenty years ago, when I laid up one hundred and fifty dollars a year. I know I can do it, for I have got all my land yet; I will increase my sheep, my flax ground and my orcharding: my prudence brings (scarce as money is) as much as it used to do. Not one thing to eat, drink or wear, shall come into my house, which is not raised on my farm, or in the country, except salt and iron work, for repairing my buildings and tools—no tea, sugar, coffee or rum. The tea-kettle shall be sold. I shall then live and die with a good conscience. My taxes, State and county, which appear now intolerable, will then be easy. My young children and my grand children will see a good example before them; and I shall feel happy in seeing a reform of abuses which have been growing on me for twenty years. If you will tell my story, it may work some good, and you shall have my lasting thanks.

How to be Rich.—The secret is not in earning, but in saving—almost any man can earn money, but few can keep it. A small sum is disregarded; yet a large one is only several small ones united; unless little ones are laid together, how can there be a great one?

Suppose a person save a cent a day—at the end of one year, he has three dollars and sixty-five cents—at the end of 20 years, one hundred dollars, including interest. How easy it is for a man to save a cent a day; how many can save ten cents a day—or thirty-six dollars and fifty cents a year—or about one thousand dollars in 20 years, including interest?

He who spends seven cents a day upon some idle fancy—for instance, in drink, cigars, fruit, &c., should at the same time reflect that he thus throws away the interest of a dollar a year.—Are there not often occasions in the course of a day, when a person spends three cents, two cents, or one cent, which he might avoid, without feeling the worse for it? Then goes his ten cents a day—his one thousand dollars in 20 years—the very interest of which would afford him and his heirs, a clear profit of seventy dollars a year. Many grow rich by saving, with but very little faculty for earning; some old men who have always lived well, are very rich from mere saving, who did not earn so much daily, as their poor neighbors.—*Maine Farmer.*

From the S. C. Temperance Advocate.

Mr. Editor—The following was prepared for the Newberry Agricultural Society, in August, 1842, but owing to the press of other matters, it was not read. I have to-day accidentally laid my hands upon it. I send it to you for the Advocate.

October 6th, 1843.

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The undersigned having intended to compete for the prize for wheat, but having, by some strange mistake, supposed that the result of an acre was required for that purpose, when in point of fact five acres should have been measured, ascertained alone the product of a single acre. But as he thinks his crop was improved by the mode of culture, he begs leave to state the same, and the result, so that if there be any thing of value in it, his brother farmers may have the benefit of it.

The first week in October, eighteen bushels of Holland wheat, and two bushels of Black Sea wheat, well saturated with blue stone, were sown upon about twenty acres of land. Eighteen acres had been in cultivation about eleven years. The other two acres were very old land. All of it was stiff red land. Upon the whole was sown cotton seed, at the rate of about twenty bushels to the acre, except upon the two acres of very old land; upon that was sown about a wagon load of cotton seed; here the Black Sea wheat was sown; the seed of it was mixed and very inferior, having for the two preceding years had the rust. The whole was plowed in and then rolled. In February, five bushels of slacked ashes per acre were sown upon the wheat An Acre of the Holland Wheat was selected and measured; it produced twenty bushels and one peck. The whole crop of Holland wheat was two hundred and three bushels, and that of the Black Sea wheat twenty two bushels. The latter was not at all affected by the rust. The rest of the crop was slightly affected by it. Whether the exemption of the Black Sea wheat from rust, this year, is to be ascribed to the large quantity of cotton seed sown, will require further experiments to decide. The value of the dressing with ashes was very apparent, and I am persuaded double the quantity per acre would answer still better.

In December, I sowed a small quantity of wheat, the toll of some ground for Col. Peter Hair. It was sown in cotton ground. The greater part of the seed was rolled in wet lime so as to incrust the seed; as far as that extended there was not the least smut. Three or four lands were sown with the seed, without being rolled with lime, and they were full of smut.—This little experiment goes far to show that lime is an antidote to smut. The wheat grew vigorously, and made an ordinary average crop of wheat for this section. I am persuaded that a little attention to the culture of wheat will, in a few years, enable us to raise our average crops, from eight to twenty bushels per acre.

John Belton O'Neall.

August, 1842.

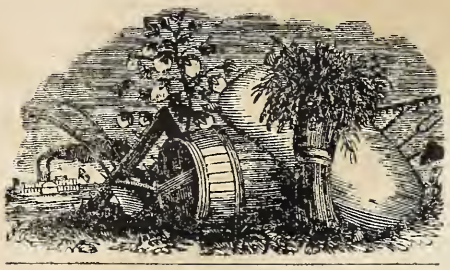
THE FARMER'S CREED.

Let this be the Farmer's creed—
Of stock, seek out the choicest breed;
In peace and plenty let them feed;
Your land sow with the best of seed;
Let it not dung nor dressing need—
Inclose and dress it with all speed,
And you will soon be rich indeed.

Farmers' Cabinet.

Immense Product.—We learn, says the National Intelligencer, that Hill Carter, Esq., of Shirley, on James river, Va. reaped from 160 acres, 5280 bushels of wheat, averaging 33 bushels per acre! This is unequalled in Virginia agriculture. His whole crop of wheat, on 270 acres, reached the large quantity of 8000 bushels, being an average of nearly 30 bushels per acre.

At Westover, the seat of John N. Selden, Esq., on James river, 100 acres of wheat averaged 30 bushels per acre; also a noble product.



WEDNESDAY, NOVEMBER 8, 1843.

BACK NUMBERS.—All new subscribers to the "Southern Cultivator" can be supplied with the back numbers.

HANCOCK FAIR.

To give place to the proceedings of the Fair of the "Planters' Club of Hancock," which reached us just on the eve of publication, we have excluded any comments of our own upon that or any other subject. We rejoice, however, to see the spirit which these Fairs seem to be exciting through the country.

ANNUAL FAIR OF THE PLANTERS' CLUB OF HANCOCK.

SPARTA, November 3d and 4th, 1843.

Messrs. Editors—The Executive Committee of the Planters' Club of Hancock, transmit to you for publication, the following synopsis of the proceedings on the days of the Annual Fair.

The Club convened at the Female Academy, on Friday the 3d, where a large concourse of citizens of this and other counties were present, to witness the exhibition of stock of various kinds, domestic fabrics, &c., which were examined by various committees; and on Saturday, the 4th, the committees reported, and premiums and honors were awarded, and an interesting address was delivered by ELI H. BAXTER, Esq., to a large collection of ladies and gentlemen.

The premiums and honors awarded were—

To Wm. Dickson, Jr., $5 for the best acre of corn, 73¼ bushels, on low land, without manure.

To Thomas C. Grimes, $3 for the second best acre of corn, 62 bushels, on old up land, medium quality, soil red clay, manured with stable manure; coltered, and planted 1st April.

Capt. R. S. Hardwick showed a fine specimen of wheat, weighing 71¼ lbs to the bushel, and yielding 42 lbs. superfine flour.

HORSES.

To Thos. Neal, of Warren county, $5 for his bay horse Wonder, 4 years old, by Pennoyer, from Old Nubbin.

To James B. Edwards, $3 for his bay horse, by imported Coronet, dam by Chanticleer.

To Thomas C. Grimes, $2 for his filly, 2 years old, by Singleton, dam Sally Word.

To James McCason, $1 for his filly, Miss Bethune, 2 years old, by Stanley, dam a Galatin mare.

To Wm. T. Brooke, of Taliaferro, $2 for his sucking colt, Miller the Prophet, by Wonder, out of a Janus mare.

To Thomas Neal of Warren county, $1 for his colt by Wonder.

To Col. John Lamar, of Bibb county, $5 for his brood mare, Bonny Bess, by Sir Hal, dam Coquette, by Sir Archer.

To Capt. R. S. Hardwick, $2 for his mare Jane Wiley, by Baron Trencke.

To Thomas Neal, of Warren county, first honor, for his bay mare Lucinda.

To Wm. T. Brooke, of Taliaferro county, second honor, for his roan mare Fire Tail.

The Club examined a Jack, the property of Wm. Daniel, of Greene county, 2 years old.—They regard him as one of the finest animals of his race, either as to form or size.

CATTLE AND SHEEP.

To Col. John Bishop, $5 for his bull Red Jacket, Ayreshire and native.

To Thos. C. Grimes, $2 for his Bull, John C. Calhoun, Patton stock.

To Thos. C. Grimes, $5 for his cow, Red Sally, and calf, Patton stock.

To Capt. R. S. Hardwick, $2 50 for his cow, Spot, native stock.

To Capt. R. S. Hardwick, first and second honors, for his cows Flower and Bet.

To Capt. R. S. Hardwick, $2 for his roan heifer Eliza, 2 years old, half Durham.

To Capt. R. S. Hardwick, $1 for his red heifer, half Durham.

The Club deem it their duty to state, that a very fine Bull, full blood Durham, bought of Col. John Lamar, of Bibb county, by R. S. Hardwick, was shown them, but no premium being given on such, can only bestow upon him their highest commendation. The Club deem it proper also to state, that a fine Bull, the property of Col. W. C. Dawson, of Greene county, and thorough bred Durham, by Denton, was shown by Capt. Hardwick, but not coming within the rules of the Club, (his owner not being a member,) he was not permitted to take a premium.

To Capt. R. S. Hardwick, $2 for his South Down Tup.

To Capt. R. S. Hardwick, $2 for his South Down Ewe.

SWINE.

To Col. John Bonner, $3 for his fine Berkshire Boar, Ontario.

To Col. John Bonner, $2 for his fine Berkshire Boar, Great Western.

To Col. John Bonner, first honor for his fine Berkshire Boar, Rip Van Winkle.

To Capt. R. S. Hardwick, second honor for his fine Berkshire Boar, Jemmy Redding.

To Col. John Bonner, $3 for his fine Berkshire Sow, Black Rose.

To Col. John Bonner, $2 for his fine Berkshire Sow, Lady Huddlesion.

To Capt. R. S. Hardwick, first honor for his fine Berkshire Sow, Shakeress.

To Col. John Bonner, second honor for his fine Berkshire Sow, Myrtis.

To Col. John Bonner, third honor for his fine Berkshire Sow, Victoria.

To John W. Moody, of Oglethorpe county, $2 for his Berkshire Pig, Miss Fisher.

To Col. John Bonner, $2 for his Berkshire Boar Pig.

To Col. John Bonner, first honor for his second best Pig.

To Capt. R. S. Hardwick, second and third honors for his fourth and fifth best Pigs.—(The pigs were between 6 and 12 months old.)

There were no hogs exhibited as fat hogs between one and two years old. Wm. H. Sayre exhibited four fine shoats, 11 months old, estimated by the Club to weigh 250 lbs each nett.

DOMESTIC FABRICS, &C.

To Miss Persons, of Warren county, $3 for a White Counterpane, in imitation of a Marseilles Quilt.

To Mrs. C. Battle, $2 for a Counterpane.

To Miss E. Beall, of Warren county, first honor for a fancy Counterpane.

To Mrs. M. Battle, second honor for do do do

To Miss A. L. Battle, third honor for do do do

The Club cannot but notice here, that there were a number of other beautiful Quilts and counterpanes, and regret that they cannot have premiums awarded them.

To Miss A. M. Kelly, $3 for a piece (10 yards) of Homespun, for gentlemen's wear.

To Mrs. Baxter, $2 for do. do. do.

To Miss Worthy, first honor for a piece of Homespun, for gentlemen's wear, which but for a deficiency in quantity, would have received a premium.

To Miss Bass, second honor for do. do. do.

To Mary J. Harris, 3d honor for do. do. do.

To Miss E. Beall, of Warren county, first honor for the best piece of manufactured Domestic Silk, in a handsome fancy reticule.

To Mrs. Lanier, first honor for a specimen of Sewing Silk.

To Mrs. Dudley, of Washington county, first honor for a handsome Table Cover.

To Mrs. Baxter, first honor for a piece of Carpeting.

To Mrs. Bird, second honor for do. do.

To Miss Arnold, first honor for a net Shawl.

To Miss Worthy, second honor for do. do.

To Miss Gordy, third honor for a wove do.

To Mrs. Simmons, first honor for a Toilet Cover.

To Mrs. Hardwick, over 70 years of age, first honor for a pair of Hose.

To Miss Sarah Baxter, first honor for a pair of Gloves.

To Mrs. Lanier, first honor for a Net Collar.

To Miss Brooking, first honor for a Lace Ruffle.

To Mrs. Bird, first honor for a specimen of rich Butter.

To Mrs. Bird, first honor for a specimen of very white and clear Tallow Candles.

James Smith and Marcellus Simmons each presented samples of Molasses made from corn stalks, rich and of fine flavor.

Messrs. Watkins & Hart presented some beautiful specimens of Tin Ware.

The officers of the Club for the ensuing year are—

BENJ. T. HARRIS, President,
JOHN BONNER, 1st Vice President,
R. S. HARDWICK, 2d Vice President,
A. E. W. Brown, 3d Vice President,
T. H. AUDAS, Secretary and Treasurer,
N. C. SAYRE, Corresponding Secretary.

Resolved, That the Secretary, under the direction of the Executive Committee, prepare a concise report of the proceedings of the Club at this Fair, and have it published in the Southern

Cultivator, the papers at Milledgeville, and the Sandersville Telescope.

In all which you will perceive that we are still persevering, and mean to continue in the great cause of improving our minds, our crops, and our stock, and producing whatever we can, that we may, as far as possible, become the exporters of the necessaries of life, and not the importers as we now are.

TUTTLE H. AUDAS, Sec'y.

EDEN, EFFINGHAM COUNTY, October 17, 1843.

Messrs. Jones—Much has been said upon the subject of plowing in green crops for manure, and as I place much more confidence in actual experiments in the field than in theory, I have made some for my own satisfaction, and as they may be useful to others, I give them to you to be disposed of as you please.

My experiments were made on level, sandy, pine land, which, when fresh, did not produce more than twelve bushels of corn per acre, and when last planted did not produce more than six or seven, and had not been planted for three years, but had been used as a calf pasture, and had become partially set with broom sedge.—Most of this field I planted about the first of July last year, in peas, which, owing to the poverty of the land and a dry season, did not grow well, but were suffered to mature and were eaten off by hogs. From this I staked off one acre for my experiment, which I will call No. 1.—Adjoining this acre I staked off another, which was not planted in peas, and was not plowed up until after it was planted this spring, say No. 2. Adjoining this I staked off another acre and sowed it in cow peas, broadcast, about the 15th of July. They came up and grew well, for such land, and about the last of September, when the peas were in full bearing, and some of the leaves began to fade, I had them plowed in—this is No. 3. Adjoining this I had another acre plowed up at the time I planted No. 3, turning in the weeds, grass and broom-sedge—this we will call No. 4; and adjoining this again, I had another acre plowed in November, after the frost had killed the weeds, &c.—this is No. 5. All this field was planted this spring in corn, and cultivated exactly alike. I have just gathered it and here is the result:

No. 1. Planted in peas and eaten off by hogs, gave	11¼	bushels.
No. 2. Remained unbroken until planted	7½	"
No. 3. Planted in peas and plowed in	10½	"
No. 4. Plowed about the 15th July.	8¼	"
No. 5. Plowed in November	9	"

From which it will be seen that the acre planted in peas and eaten off by hogs, gave the greatest yield, and the acre not plowed until after it was planted this spring, the smallest.—This last I do not believe would have been the case if the land had not been rested more than one or two years; for I believe that when our land gets set with broom-sedge it ceases to improve, and the dry broom-sedge plowed in, in the spring, decays so late as to be of no service to the crop. The piece plowed in July is the next lowest. This, I think will be of great service to me, as I have been in the habit as soon as I finish plowing my crop, to commence breaking up my land for the next crop, believing that turning in the weeds &c., in a green state would improve the land, but I am now convinced that turning up and exposing the land to the sun, at this hot season of the year, does it more injury than the weeds turned in does it good; and besides it is harder on my mules and plow hands than any other plowing they have to do. The system of planting peas for stock, I am glad to find, is best for the land, as it not only improves the land, but gives us a crop of peas for our labor.

I may, at a future day, give you my method of planting peas, as it may be of service to young planters.

Very respectfully, yours,

C. POWERS.

The fattest oxen at the New York State Agricultural Fair were exhibited by Jeremiah Brown, of Orleans county. There were three of them, weighing severally 3200, 3800 and 4000 pounds.

We regret to learn by the following from the *Columbia (S. C.) Planter*, of the 25th ultimo, that the proprietors of that paper have been compeled to discontinue its publication:

It is with regret that we announce that this Paper has so far failed to obtain the patronage which we were encouraged to expect when commencing it, that we cannot afford to continue it, on its present footing. We therefore suspend its publication until the meeting of the State Agricultural Society, when an effort will be made to raise it to a better condition. Should that effort succeed, it will be immediately resumed—otherwise, the money that has been paid for subscription beyond the present time will be returned.

The National Intelligencer has the following description of a simple invention by Dr. McWilliams, of that city, for gathering fruit:

The "Fruit Gatherer" is an instrument designed and well adapted for plucking fruit from the tree where it cannot be reached by the hand. The fruit is gathered from all the branches without the slightest injury to either the tree or fruit, and in the most delicate manner. It plucks off all sizes of fruit, from a cherry to the largest apple. It is easy of construction or repair, and the expense trifling. A lady or gentleman in their garden or orchard, standing on the ground, may select such fruit as is wished and obtain it without disturbing that adjacent. This instrument accomplishes perfectly what has frequently been attempted both in Europe and this country in vain.

FALL AND WINTER PLOWING—As occasion may offer through the fall and winter, plow up your stiff clayey grounds, which may be destined for spring crops. But be sure *never to plow when the land is wet*, as when turned up in a state of mortar, it will so remain during the ensuing season, and probably will receive no benefit from the breaking down influence of freezing and thawing. If you desire to derive the melioration contemplated, your ground must be in a good condition when plowed. Besides the improvement of texture in the soil derived by fall and winter plowing, much time, which is always precious in the spring, may be thereby gained at that season of business, but even this latter advantage will be lost to the farmer, or planter, unless he see that his ground is in a proper condition when plowed.—*Amer. Farmer.*

In Mr. Webster's Rochester speech occurs the following beautiful thought, as beautifully expressed:

"Gentlemen, every body knows that the foundation of all that is important in human life, lies this great business—the cultivation of the earth. If it were for his sins that man was condemned to till the land, it was the most merciful judgment that Almighty benignity could have inflicted upon him!"

From the Southern Planter.

IMPROVING OLD LANDS.

Mr. Editor—At the request of a friend, I wrote to Dr. R. D. Palmer, desiring him to communicate any knowledge which he had derived from experience as to the best mode of improving our old lands. I send you for publication what he says on the subject, as he gave me permission to do so if I thought any one might be benefited by it. It is evident that we shall have to resort to this or some other mode for restoring our worn-out lands. From my own experience and observation, I feel no hesitation in saying, that I believe the Doctor's plan to be the most practical and economical I have seen suggested.

J. MORTON.

Spring Grove, Campbell, Aug. 11, 1843.

In 1827, I settled on a farm of 560 acres, in the lower end of Campbell county, in the most exhausted condition of any, perhaps, in the State of Virginia. It had been under the very worst system of management from the time of its settlement in 1755. The soil being red, its aspect generally was more that of a gully-side than any thing else. Hundreds of gullies were everywhere to be seen, some from forty to fifty feet wide, and as deep as a common house-top. The previous occupant had annually expended from one to two hundred dollars for corn. An intelligent lady remarked to me that "the land was so thin that we would have to double it."

From this appalling picture the question will naturally arise, "why did you purchase?" The answer is, that "I thought it a suitable stand for the practice of medicine, and that from some eighty or ninety acres of creek bottoms I should be able to draw a support until the exhausted land could be reclaimed."

At first I divided the farm into four equal shifts, and cultivated in corn, followed by wheat, where the land was thought to be good enough to produce it, and where not, in oats or rye. In consequence of the great poverty of the soil, rye was generally preferred, as oats would not grow high enough to be cut. My aim, from the first, was to clover and plaster all of the land in small grain; but, from the paucity of my means, much could not be done in that way for several years. Experience soon taught me that one-fourth of my land would not produce enough to support my family of ten or twelve in number; and that the better way would be to resort to a ring-fence, and cultivate the flat land and such places as required cleaning up, while I was manuring the thinner parts of the farm. My aim has ever been to raise as much manure as I possibly could, without neglecting other necessary things; and always to haul out in the spring. The principal resources have been from corn-stalks, leaves, straw, &c. When put in the stables and farm-pens they afford comfortable beds to the horses, cattle, &c., while, at the same time, they absorb and retain the liquid manure, which otherwise would be lost.

The present condition of my farm will tell whether my efforts have been in vain.

I should not neglect to say, that as soon as all of my galled land got in a condition to bring grass, I again divided my farm into five, instead of four shifts; and that now we fallow one, so as to have, annually, one in corn and two in small grain.

I made no tobacco until my fields every where, through the assistance of manure, clover, plaster, &c., had taken on a rich mantle of green.

The first object of the farmer, in reclaiming

worn-out lands, should be to extend his manures so as to get as much stock in grass as he can. For this purpose I think top-dressing answers the purpose best. A mixture of red clover, herdsgrass, timothy, greensward seed, &c., with plaster of Paris, sown late in February or early in March, so as to put a bushel of plaster to the acre, will generally stick well, especially if the thinner places have a little top-dressing. But little grazing should be done except on the field intended for corn the ensuing year; and that, principally, after the full blossoming of the clover.

As time and leisure may be afforded me, from the pressure of my engagements, I may address you on some of the individual branches hinted at in the foregoing desultory epistle.

Very respectfully,
R. D. PALMER.

A VIRGINIA FARM.

A corresponnent of the Boston Traveller, writing from the valley of the Shenandoah, last autumn, gives the following account of the Steenbergen farm, situated in that valley, some 40 miles above Winchester. Few parts of the United States afford examples of more fertile soils, and few instances of better cultivated farms than the rich valley of the Shenandoah.

"On ascending the opposite bank of the river we entered the extensive grounds of the celebrated Steenbergen farm, a view of which is worth a day's journey in more oppressive heat than we experienced to-day. The farm consists of 7000 acres, a large portion of intervale or bottom land, and nearly the whole is under cultivation. The family mansion is beautifully situated on rising ground, overlooking the whole area, and the farm houses are conveniently arranged in the vicinity for the overseers and slaves. The hay crop was gathered, and the quantity may be judged from the fact that from 1500 to 2000 head of cattle are kept on the premises. The wheat too, between 400 and 500 acres, had been harvested, and much of it was already threshed and sent to market. Our road passed through a luxuriant field of corn, nearly ripe, embracing a level tract of 600 acres, and a richer sight for the lover of scientific husbandry I have never seen. Mr. Steenbergen, who owned this unrivalled farm, and by his agricultural skill, extraordinary energy and perseverance, in a few years greatly improved the strength of the soil, rendered the property more valuable, probably, than any other farm in the United States."

We may add here, as a warning to others, that not satisfied with his farm, Mr. S. became infected with the speculating notions at one time so prevalent; that he was with many others unfortunate, and when he failed some three or four years since, his liabilities amounted to more than a million and a half, of which about $650,000 was to the United States Bank. Mr. S. is now a resident of La Porte, Ind., and his farm has passed into the hands of Mr. Munn, of Lynchburg, Va.

"Such as have virtue always in their mouths and neglect its practice, are like a harp, which emits a sound pleasing to others, while itself is insensible to the music."—*Diogenes.*

AUGUSTA MARKET.

Cotton—The market for a few days has been very active, and large sales have been made at an advance of ⅛ to ¼ cent ℔ lb. on all descriptions. We now quote 6 @ 7¼ cents as extremes of the market—remarking that it requires an extra prime article, in the best possible order, to command our highest figures, while the principal sales are 7 @ 7¼ cents.

Dry Goods, Groceries, &c.—Business among our merchants wears the appearance of considerable activity, and they seem to be sending a large amount of goods to the country, at prices which give satisfaction. The stocks of goods appear large and well selected.

Exchange—The rate for Exchange is ½ ℔ ct. premium on New York and the Northern cities, and par on Charleston and Savannah. Central money continues at 6 @ 7 per cent discount.—We hear of large sales of State Bonds at 76 cents.

AUGUSTA PRICES CURRENT.

BAGGING, Hemp	yd.	16	@	20
Tow	"	15	@	18
Gunny	"	18½	@	19
BALE ROPE	lb.	6	@	10
BACON, Hog Round	"	5	@	6½
Hams	"	8	@	10
Shoulders	"	4	@	7
Sides	"	6	@	8
COFFEE, Green prime Cuba,	"	9	@	10
Ordinary to Good	"	7	@	9
St. Domingo	"	7	@	9
Rio	"	9	@	10
Laguira	"	9	@	10
Porto Rico	"	9	@	10
Java	"	11	@	14
CORN	bush.	33	@	40
FLOUR, Canal	bbl.	5 75	@	6 50
Baltimore	"	none.		
Western	"	none.		
Country	"	4 00	@	5 50
FEATHERS	lb.	30	@	37½
IRON, Russia	cwt.	4 50	@	5 00
Swedes, assorted	"	4 50	@	5 00
Hoop	"	7 00	@	8 00
Sheet	"	7 00	@	8 00
Nail Rods	"	7 00	@	8 00
LEATHER, Sole	lb.	23	@	28
Upper	side	1 50	@	2 00
Calf Skins	doz.	18 00	@	36 00
MOLASSES, N. Orleans	gal.	31	@	35
Havana	"	25	@	30
NAILS	lb.	4½	@	6
OATS	bush.	37½	@	50
PEAS	"	40	@	50
SUGAR, New Orleans	lb.	6	@	9½
Havana, white	"	11	@	12
" brown	"	7	@	8
Muscovado	"	7	@	9
St. Croix	"	8	@	11
Porto Rico	"	7	@	9
Lump	"	14	@	16
Loaf	"	15	@	20
Double Refined	"	12	@	13
SALT, Liverpool ground	bush.	45	@	50
" "	sack	1 75	@	2 00
STEEL, German	lb.	15	@	16
Blistered	"	8	@	12½
TWINE	"	20	@	25
TEA, Behea	"	50	@	75
Souchong	"	60	@	75
Hyson	"	80	@	1 25
Gunpowder	"	1 00	@	1 25

CONTENTS OF THIS NUMBER.

	PAGE
Indian Corn	177
Management of Cattle; Apple Bread; Experiments and Observations on the Production of Butter	178
Rules for Improvement in Breeding Stock; Preparation for Winter; Preserving Sweet Potatoes; Wilkes Agricultural Society; Saving Seed Corn; Manure; Transplantation of Orchards; Cure for Spavin	179
To have Good Crops; Cow-house, Making Manure, &c.; Chicken Hatching	180
The Cause of and Cure for Hard Times; How to be Rich; Wheat; The Farmer's Creed; Immense Product	181
Proceedings of the Annual Fair of the Planters' Club of Hancock	182
Plowing in Green Crops; Fat Oxen; The Columbia Planter; Fruit Gatherer; Fall and Winter Plowing; Extract from Mr. Webster's Rochester Speech; Improving Old Lands	183
A Virginia Farm	184

GARDEN AND FIELD SEED.

A GENERAL assortment of fresh and genuine GARDEN and FIELD SEED, among which are the following:

Red and White Clover,
Blue and Green Grass,
Rye and Orchard do.,
Timothy and Herds do.,
Millet and Lucerne do.,
Seed Corn of every valuable variety,
Seed Wheat,
Buckwheat and Potato Oats,

Kept constantly on hand by the subscriber, all of which are offered for sale at very moderate prices. All orders, by mail or otherwise, executed with neatness and despatch.

WM. HAINES, JR.,
No. 232 Broad street, Augusta, Ga.
August 30. 18-tf

TURNEP SEED.

A SUPPLY of the following varieties of fresh TURNEP SEED just received, viz:

Yellow Sweedish or Ruta Baga, very fine for stock,
Large Globe Turnep, } Fine
" White Flat do. } for
" Hanover or White Ruta Baga do } table
" Norfolk do. } use.

For sale in quantities to suit purchasers, by
Aug. 30 18-tf WM. HAINES, JR.

BOMMER'S PATENT MANURE.

THE undersigned is the Agent of Messrs. Abbett & Co., for vending rights to individuals for making and using the above named Manure. By reference to the following advertisement of Messrs. Abbett & Co., the prices may be ascertained. All orders addressed to me, *post paid*, at Sparta, Ga., will receive prompt attention.
Aug. 30. 18-tf R. S. HARDWICK.

THE BOMMER MANURE METHOD,

WHICH teaches how to make vegetable manure without the aid of live stock, in from 15 to 30 days, by a course of humid fermentation set into action at a cost of from 50 cts to $4.

And also to make Compost *in a few days.* And how to make a rich fertilizing liquid called "purin," having all the strength without the acrid qualities of urine.

With the view of graduating the cost to the quantity of land upon which it may be desired to use the method, the following scale of prices has been adopted, viz:

For Gardens of any extent $6
Farms up to 100 acres 10
" from 100 to 200 acres 15
" " 200 to 300 " 18
" " 300 to 400 " 20
" over 400 acres in any one farm ... 25

By the remittance of the sum here specified, a copy of the method will be sent by mail or in any other mode proposed by the purchaser.

All letters of inquiry must be post paid.
ABBETT & CO., Baltimore,
Proprietors of the patent right for the Southern and Western States. aug 16

THE SOUTHERN CULTIVATOR

IS PUBLISHED BY

J. W. & W. S. JONES,

And will be issued every other Wednesday, at ONE DOLLAR a year, INVARIABLY IN ADVANCE. The CASH SYSTEM will be rigidly adhered to, and in no case will the paper be sent unless the money accompanies the order.

ADVERTISEMENTS pertaining to agriculture will be inserted for ONE DOLLAR for every square of TWELVE lines, or less, for the first insertion, and SEVENTY-FIVE CENTS per square for each continuance.

☞POST MASTERS are authorized to receive and forward money free of postage.

☞ALL COMMUNICATIONS MUST BE POST PAID

SOUTHERN CULTIVATOR.

VOL. I. AUGUSTA, GA., NOVEMBER 22, 1843. No. 24.

PRIZE ESSAY.

THE PREPARATION AND USE OF MANURES.

BY WILLIS GAYLORD,

(Concluded from page 171.)

LIME.

There is no substance, containing no animal or vegetable matter, which exercises a more powerful or beneficial effect than lime, in some one or all of its forms of carbonate, phosphate and sulphate. In the common form in which it is found, that of carbonate, it acts in two ways, mechanically and chemically. Being less porous than sand, and more so than clay, its mixture improves soils in which either of these prevail; while as an alkaline earth, it acts chemically on such animal or vegetable matters as may exist in the soil. Lime developes its chemical action most fully when in its caustic state, or when, by burning, the carbonic acid has been expelled, and the lime rendered what is termed quicklime. In this state, it dissolves such organic matter as may exist in soils, and prepares it for the food of plants. Humus frequently exists in the soil in a solid and insoluble state; lime applied to this renders it soluble in water, in which form it may be taken up by the roots of plants. A vast deal of needless controversy has been carried on respecting the value of lime as a manure, or the quantity which should be used per acre. By some, it has been extolled as the very highest on the list of effective manures; while others have decried it as of no use whatever; and both have appealed to experiments as establishing their positions. A knowledge of the nature of the action of lime, would have prevented such seeming contradictions. "Lime in excess, forms, from the humus of the soil, an insoluble salt; and may thus, when applied to a soil abounding in salts of lime, or in which it already exists, be productive of injury, whatever may be the vegetable or organic matter of the soil. In this state of excess, lime converts, but at the same time locks up, the humus of the soil; when if applied in the right quantity, it would have been useful.—Lime is of no value whatever as a converter, or produces no chemical effect in promoting growth, unless there is organic matter in the soil on which it can act. Lime is most efficient when used on soils full of insoluble humus, such as peaty matter or woody fibre, but which, from the abundance of the tannin principle contained, resist the ordinary processes of decomposition." There would seem to be no difficulty, therefore, in determining whether lime can be used on any given soil to profit. Indeed there are, it is believed, none where it would not be useful, except such as are already supplied with this carbonate, or those which are wholly destitute of vegetable or organic matter. As a general rule, the greater the quantity of humus in a soil, the greater the amount of lime which may be applied with benefit. As long as there is a store of organic matter in the soil, lime, if not in excess, is a valuable manure; but when this is exhausted, the application of lime only increases the sterility by destroying such efforts at vegetation as might in time, aided by light and moisture, partially remove the unproductiveness existing. This fact may serve to explain some of the conflicting statements that have appeared in the agricultural journals of our country, on the use of lime. Where humus is abundant, the quantity that may be safely used, is very great; on soils already poor, a small portion speedily exhausts the remaining powers of the soil. Lime, from its alkaline qualities, acts in neutralizing whatever free acids exist in soils, whether oxalic, phosphoric, malic, or others. It acts also in decomposing some of the earthy or compound salts formed in the soil, and thus renders the geine held by them available to the plant; but its great and most important use is in converting the insoluble organic matters existing, into soluble ones, and thus directly furnishing an abundant source of nutriment. Carbonate of lime is sometimes used pounded or broken fine; and in this state, its mechanical value is great in stiff or clay soils. Such soils too, usually abound in acids; and these gradually acting on the lime gravel, its chemical effect is slowly but beneficially apparent.

MARL.

Marls, which exert so powerful an influence on many soils, derive most of their value from the lime they contain; and with few exceptions, their power as fertilizers may be measured by the per cent of lime shown on analysis. There are some marls, however, which are an exception to this rule; their value appearing to depend on other matters than mere lime. Of this kind is the celebrated green sand marl of New Jersey, and some other points of the Atlantic coast. In this formation, which acts so powerfully as manure, there is from 6 to 10 per cent of potash; an agent which, on light soils, is scarcely equaled as a manure. In addition to the lime which marl contains, the influence of the proportions of sand and clay, of which the balance usually consists, must be taken into consideration in determining the value of this substance for particular soils. Thus, on heavy or clay lands, marls abounding in sand will be found preferable to those the base of which is clay; and on light or sandy soils, the latter will be much the most useful, the per cent of lime in both cases being alike. Marl should be spread over the surface, and pulverized by the action of air and frost before it is plowed under. When so treated, experience proves it is a most valuable manure, and a single dressing exerts an influence for many years.

PHOSPHATE OF LIME.

Of another salt of lime, the phosphate, notice has been taken when treating of bones as a manure. It will not be amiss, however, to state here, that when any substance is invariably found in any part of a plant or plants, it is right to infer that the perfection of that part of the plant is impossible, unless the substance required is within reach of the plant while growing. Thus the stems of the grasses abound in silex; some of them, the cane for instance, to such a degree as to strike fire with steel, and unless this substance, in the form of silicates, was presented to the plants, they would not be perfect. So it is right to infer that unless soils contain the phosphates, or a supply is furnished for the use of plants, that the cereal grains could never be perfected, as the seeds of these invariably contain large quantities of the phosphates. Phosphates are found more or less in all soils, and when these are deficient, bones form an abundant and accessible source for their supply. It is also found in considerable quantities in all animal and farm yard manures, particularly in the liquid part.

GYPSUM OR PLASTER.

Gypsum is the third principal salt of lime which exerts a powerful influence on plants, and is one of the most valuable of all our mineral fertilizers. Much variety of opinion has been entertained respecting the manner in which it exerts its influence or produces its effects on plants; and these opinions can scarcely be said to be harmonized, even at the present time.—Davy was inclined to consider it a direct food for the plant, as it is found, to some extent, in those plants on which it exerts the most power. Chaptal referred its power to its stimulating agency on plants, produced by its action when dissolved in water. Liebig ascribes its value to its giving a fixed condition to the nitrogen or ammonia which is brought into the soil, and which is indispensable for the nutrition of plants. Dana, to the action of the lime and acid of which the gypsum is composed on the organic matter and silicates of the soil. He says—"It seems almost incredible that so minute a portion of a mineral can act at all; yet how beautifully is the result explained by the principle that plants decompose first this salt; the lime, for plaster is a sulphate of lime, then acts on geine, which is thus rendered soluble; while the acid, the oil of vitriol or sulphuric acid, immediately acts on silicates." It seems very probable that no single one of these suppositions will be found able to account in full for the action of plaster. That of Dr. Dana appears to approach as nearly to a solution as any of them, if we extend his term silicates so as to embrace those combinations formed by the union of the acid of the gypsum with ammonia, after its separation from the lime. If the action of plaster was due to its fixing ammonia alone, then it ought to be equally efficient at all times and places, which it certainly is not; or if it acted directly as nutriment, then its action would be as constant as that of rotted manure or compost, which farmers well know is not the case. Plaster does not act as usefully in the vicinity of the sea, as in the interior; and on heavy wet soils, is scarcely felt at all. Light sandy soils, or loamy ones, are those on which plaster acts the most sensibly; and clover, lucerne, potatoes, cabbages, and the leguminous plants, such as peas, vetches, &c., are the vegetables on which it exerts the most powerful influence. It is much valued as a dress for wheat, not so much, perhaps, for its direct action on that plant, although that is not trifling, as for its effect in securing and promoting the growth of the clover and other grass seeds, usually, in wheat countries, sown with this crop. So marked is the influence it exerts in this respect, that plaster, clover, and wheat, are always associated in the mind of the most successful wheat growers; and its use is the most extensive in the best wheat growing districts of our country. In the minds of many, a senseless prejudice has existed against plaster, on the ground that it the more speedily exhausts the soil, and that the heavy crops at first obtained were the price of ruined farms. It is doubtless true that the man who uses plaster on his farm, who takes from his soils all he can get, and returns nothing to them, will soon find his soils worthless enough. He

who intends to farm it in this way, should avoid plaster; but let any farmer alternate wheat and clover; husband and apply his manures; feed off his clover in his fields, or to his stock in their stalls; let him not spare his grass seeds in seeding, or his plaster in dressing, and his farm will never run down. Such men need not fear plaster.

SALT.

Common salt is an active and valuable manure, and has been used successfully as such, in all parts of the world where it can readily be obtained. In England, the pickings or impure salt is used for this purpose; and many experiments are on record to show that the effect is most marked and decisive. The following is one of a series of experiments instituted by Mr. Sinclair, to test the value of salt as a manure. The soil was light and gravelly.

No. 1. Soil without any manure for four years. Product per acre..... .....13 bush. 26 lbs.
No. 2. Soil manured with stable dung to the previous crop, (potatoes,).....26 " 52 "
No. 3. Soil with 5 bush of salt per acre, and no other manure for 4 years....26 " 12 "

In the opinion of Mr. Sinclair, the effect of salt as a manure was to lessen the produce of straw as compared with other manures, and to increase the weight of the grain.

Prof. Johnston has done more than any other person to extend the use of salt as a manure, by giving to the world his excellent Essay on salt used on soils, and the mass of experiments he has recorded. It appears that salt, in small proportions, promotes the decomposition of animal and vegetable substances; that it destroys vermin and kills weeds; that it is a direct constituent of some plants, and therefore necessary to their perfection; that all cultivated plants of marine origin contain it, asparagus for instance; and that all such succeed better when watered with salt water, than when deprived of it; that salt preserves vegetables from injury by sudden transitions in temperature, salted soils not freezing as readily as those to which salt has not been applied; and that it renders the earth more capable of absorbing the moisture of the atmosphere. When salt is applied as a manure, it may be used in quantities from six to fifteen bushels per acre; although some have gone as high as 50 bushels. Farmers, however, should be cautious how they venture on excessive doses, as an extravagant one could scarcely fail of being atal to any crop. Legrand, in his experiments with salt, found that it gradually improved the crop of barley until sixteen bushels per acre was reached, when it gradually diminished until the amount of forty bushels per acre was reached, when vegetation was destroyed. Salt combined with manure, has proved very efficient; and in the Woburn experiment, the wheat so treated exceeded all others. The most favorable proportions were found to be 45 tons of dung, and five and a half bushels of salt per acre; the manure plowed in, the salt sown with the seed. The experiments that have been made, would seem to indicate that a preferable mode of using salt, in most cases, would be to sow it on the land some weeks before the seed is to be put in. In this case, where lime exists in the soil, a chemical change takes place, at least partially, and muriate of lime and soda is the result. Such a change would seem to be most favorable to vegetation.

SALT AND LIME.

Salt and lime, artificially mixed as a manure, promises to be a valuable aid to the farmer in those positions where the soil abounds with insoluble silicates or geine, and where other manures necessary to produce decomposition or fermentation are not at hand. Prof. Johnston recommends a mixture of two parts of lime and one part of salt, the mixture to remain incorporated in a shady place, or covered with sods two or three months before using. Salt and lime should not be used immediately after mixing, as bad results are apt to ensue; but after being well mixed in a dry state and lying as directed, it may be applied at the rate of from thirty to sixty bushels per acre, either before or at the time of sowing. Mixed with soot, salt acts with great power on roots. Mr. Sinclair mixed six and a half bushels of soot with the same quantity of salt, and used the mixture on lands sowed to carrots. The result was, that unmanured land gave twenty-three tons of roots per acre, and the manured yielded forty tons per acre; and Mr. Cartwright found that where unmanured soil gave 157 bushels of potatoes per acre, 30 bushels of soot and six of salt, made it produce 240 pushels per acre. Dr. Dana furnishes so beautiful an explanation of the manner in which this manure acts, that it deserves a place entire: "By mixing quicklime with common salt, its soda is let loose, the acid combines with the lime, forming a soluble salt of lime, and so long as the soda remains caustic, it has no effect on the muriate of lime, but as soon as the soda becomes mild or carbonate, decomposition of the muriate of lime is produced, and the common salt regenerated. Commencing then with quicklime and salt, we pass to a soluble salt of lime and caustic soda, and from that to mild soda, and to carbonate of lime and the original salt. If these various changes take place in the midst of peat or geine, it is evident that the caustic soda acts upon the geine, and also evolves ammonia from that substance; secondly, that the muriate of lime, in its finely soluble state, insinuates itself among the particles of the geine; that the soda is also equally diffused, and that when the soda becomes carbonated, it produces an almost impalpable carbonate of lime throughout the whole mass, which, by its equal diffusion through the soil with the geine, acts upon the silicates, as has been heretofore explained." To produce these effects, Dr. D. directs to take one bushel of salt and two bushels of lime; to make the salt into strong brine, and with it slack the lime. Mix both well together, and let them remain ten days; then let them be well mixed with three cords of peat, shoveled well over for about six weeks, when it may be used. A quantity of salt sufficient to destroy all vegetation, may be applied to a soil with safety when a few months are to elapse before the crop is to be put on; as the chemical changes which take place, partially neutralize its effect during this time. A small quantity mixed with the soil in each hill of corn, has been found to protect it from the wire worm and the cut worm; indeed there is no substance that insects of all kinds more dread than salt.—It is probable, therefore, that further experiments will show that not the least value of salt is to be found in its preventive properties against these depredators

CHARCOAL.

Charcoal is a valuable manure, and applied directly to the soil in a pulverized state, produces excellent effects. It acts by rendering the soil more permeable to atmospheric air, by absorbing and retaining for the use of plants the ammonia of the atmosphere, or such as falls in showers; by rendering soils with which it is incorporated warmer; and by furnishing a constant supply of carbonic gas to growing plants. The great productiveness of what are called coal hearths, or those places on which charcoal has been burned, has long been a common remark, but this has been commonly attributed to the ashes, burned earth, &c. on such spots, rather than the coal. The use of coal alone, however, shows that though these other matters are not without their value, the great additional fertility of these places is mostly owing to the coal. Immense quantities of this substance are wasted in the vicinity of forges, furnaces, smith's shops, &c. which would be of great value, were farmers to collect such refuse or dust coal, and apply them to their farms. On heavy soils in Europe, it has long been customary to pare the surface, and burn the turf so collected, taking care to incorporate as much of the clay soil as will consist with the ignition of the turf. This burnt mass of clay and ashes is scattered over the ground, and is found to make a valuable dressing on such soils.

OTHER MANURES.

It is impossible to particularize all substances that may be used as manure. It is evident, from the definition first given, that they would embrace all animal matters without exception; all excrementitious secretions of animals, and all vegetable ingredients in one form or another, together with a few of the mineral salts, such as the alkalies, silicates, &c. Thus, oil-cake, bran, yeast, brewers' grains, putrid meat, in short any substance that can be classed under the above divisions of matter, may be useful as manures, and this fact should induce great caution in their preservation and application.—Whatever may be the present condition of a particle of matter, if it has ever formed a part of an organic body, it can again become such under circumstances favorable to such a condition.

In the preceding rapid sketch of the principal substances valuable as manures, the best methods of preparation and use have also, to a considerable extent, been given. All then that would now seem necessary for the purpose of this Essay, is a condensed view of the principles laid down, with such incidental topics as have been passed over, but of which a notice appears necessary.

PREPARATION AND USE OF STABLE MANURES.

As the common farmer must always rely on stable or farmyard manure, as his principal means of fertilization and renovation of his soils, it is to these, to their preparation and use, that his attention must be principally directed. It is an important question for him to decide, whether he should apply his manure in a long state, that is, apply it fresh from his stables and yards before undergoing decomposition, or let it remain until the litter and straw has fermented and become rotten, before using it. Some remarks on this topic have been made in the preceding pages, when treating of such manures, but its importance will justify their extension in this place. It has been said that rotted manure contains more geine or humus, weight for weight, than unrotted or fresh manure. This is probable, but to make this test decisive, equal weights of dung should be taken while fresh, one analyzed at the time, and the other when fermented and rotted. This course, it is believed, would show a result in favor of the unrotted. There can be no doubt, however, that straw, stable litter, &c. should be partially fermented before using, and the moisture necessary for the process should, if possible, be the urine of the animals or the drainings of the yards. Straw, in dung intended for a particular crop, is of little use unless the fermentation has far progressed; and a distinguished German farmer has asserted that he considered straw as of no consequence in manure, except as acting the part of a sponge to retain the fluid parts of the animal manures. There are some exceptions to this remark, as when straw is applied to heavy clay grounds before rotting. In this case, when plowed under, it gives a degree of porosity to the soil, absorbs part of the moisture, and acts the part of a valuable amender, while it is eventually converted into a manure, or a source of carbonic gas. Where the unfermented dung of the yard or stable is applied to the soil, it should be covered at once by the plow, that the gases liberated in fermentation may not be lost, and that the moisture necessary for fermentation may be secured. When rotted or fermented, the covering is not of so much consequence, and it may, without loss, be scattered on the surface and mixed with it. If used without fermenting, it should be applied to hoed or summer crops, such as corn or roots, as these are in that state while the manure is at the height of its fermentation, when forcing manures are the most useful; but if applied to the smaller grains, they are most active when matter for the perfection

of the seed, not the enlargement of the straw, is most needed, and the last is increased at the expense of the first. Taking all these circumstances into consideration, there can be little question that the most economical way of making and using manures, is to convert the stable and barnyard manure into compost, by the addition of peat, swamp muck, cleansing of ditches, wash of roads, leached ashes, or even common loam or earth, taking care, when the manure is wanted for heavy soils, that the earth used in the compost should be as light or sandy as may be; and where the soil is light, that the compost earth should be marly clay. Into such a compost heap, all weeds, straw, litter, animal matter of all kinds, night soil, &c. &c., may be thrown, and upon it all the wash of the yards and urine of the stables may be poured; and if the animal and vegetable matters as they accumulate, are kept covered and moist, the fermentation will go on successfully; the alkalies and salts of the animal matters will act on the vegetable part and saturate the earths used, and the whole will be converted into manure of the most valuable quality.

PREPARATION AND USE OF COMPOST.

The labor of preparing compost, it is true, is much greater than merely drawing it from the yard, but the quantity is so much increased, and the quality so much improved, that it is the most economical in the end. The only method that can compare with it, is to place these matters over the yard, and let them be composted or fermented in that place; but there will always be a great waste in this way; and where turf or vegetable mold is used for composting with the animal manure, the compost heaps can frequently be made where they are to be used, and the labor of drawing materials greatly lessened.—Bommer's patent manure is only compost made in a scientific and accurate manner, every part of the process so managed as to produce a perfect fermentation, without the loss of any of the valuable parts of the constituents used. From a knowledge of the process employed by him, we are able to say that where his directions are followed, a powerful and valuable manure cannot fail to be produced. The fundamental principle upon which composts have been made, is that of impregnating the earths used in the process with the soluble salts and the gases, which, in the ordinary methods of rotting, are wholly or partially lost to the farmer. The discussions which have been carried on, as to the propriety or impropriety of burying manures in the soil, have arisen from not stating the kind of manure to be used. The solid and soluble parts of manures have a tendency to sink into the soil; the gases evolved in fermentation a tendency to rise. The true principle, then, is to bury the unfermented matters no deeper than is necessary to secure the moisture required for fermentation, while the fermented or decomposed dung, having no fertilizing gases to lose, may be mixed at once with the surface earth. Some of the greatest crops of Indian corn ever grown in the United States, have been produced by placing a heavy dressing of unfermented manure on turf land, and turning it under with the plow. The surface is then rolled to press the sod close upon the manure, and afterwards harrowed, to loosen the earth for the reception of the seed. Into each hill, a small portion of fully rotted manure or compost is put at planting. This promotes germination, gives the young plant a vigorous start, and by the time the roots have penetrated beyond this, active fermentation has commenced in the long manure, and thus fertilizing matters are furnished in the greatest abundance when most wanted by the plant.

USE OF LIME.

Of the mineral manures used, lime, as has been already stated, is the most important, and under all its forms, is extensively used in Europe and in this country. The German farmers of Lancaster, Chester, and the adjoining counties of Pennsylvania, use lime more extensively than in any other part of this country. Considerable discussion has been had at different times as to the comparative value of limes that contain magnesia, or such as are free from it; but the value of lime as a dressing for soils, seems to be every where conceded in those districts where it has been used. It appears as the result of experience, that lime produces the best effect on what are called stiff loams, or loams inclining to clay, and in which a good proportion of decayed organic matter is found. It is found, too, that it operates more favorably on soils natural to oak and its kindred trees, such as walnut, poplar, &c. than on those where the beech, elm and maple constitute the principal timber. It is singular that the richest limestone lands, as they are called from being based on this rock, are frequently those on which heavy dressings of lime operate like a charm. If used as a top dressing, lime is usually applied to the sod in the fall; but the practice most approved, is to lime the corn ground in the spring, on the inverted sod. Manure is applied to the wheat crop after lime. The quantity of lime used varies much. There is no doubt it has sometimes been used in excessive quantities; and when used on soils nearly destitute of vegetable matter, can produce no good effect. On a medium soil, fifty bushels per acre may be considered an abundant dressing; but three or four times that quantity is sometimes used. The best method of using lime, is to take it from the kiln, unslacked, and deposit it in heaps in the field where it is to be used, not more than three or four bushels in a place; and either slack it by pouring water over it, or, which is better, by covering each pile with earth, and letting them slack by the moisture thus furnished. When sufficiently fine, the earth and the lime are mixed by shovelling over, and the mass is then scattered over the land to be dressed. The soil should be well harrowed after the application of lime, to incorporate it with the surface earth.

NECESSITY OF MANURING.

It is obvious that the manuring of a farm should only be limited by the ability of the owner. On a plentiful supply of manures, is depending the fertility of his soils, the amount of his crops, and consequently the extent to which his labor is rewarded. There is no expenditure on a farm so safe as that for manure; and the labor required to increase it, is never labor lost; at least, if directed by an ordinary share of agricultural knowledge and skill. Every source of supply should be made available; nothing capable of fertilizing should be lost. The farmer who takes from his soil more than he returns to it, is surely impoverishing it; and if he escapes such a calamity himself, he leaves to his successors a worn out farm. If he returns as much as he receives, his farm will retain its original fertility only; but the true farmer will scarcely be content with this. To increase its fertility, and the amount and quality of the crop taken from the soil, should be the aim of the husbandman. This done, his labor is lessened, his profits are greater, his farm is worth more; nor must the pleasure arising from beautiful fields, golden harvests, fine animals, accumulating prosperity, be omitted in making up our estimate of the advantages of successful culture. Manure may be a homely subject, but on its preparation and use every thing is depending. Without it, the deep green of our pastures, the golden yellow of our corn fields, and the fine beef and white loaf of our tables could not exist. To the farmer, manure must be the first thing, and it must be the last thing; with it he can do every thing; without it, nothing.

"Honor and fame from no condition rise."

There is but one way of securing universal equality to man—that is, to regard every honest employment as honorable, and then for every man to learn, in whatsoever state he may be, therewith to be content, and to fulfil with strict fidelity the duties of his station, and to make every condition a post of honor.—*S. W. Farm.*

FARMERS' CLUBS.

Of the various methods that have been adopted to awaken inquiry among farmers, promote investigation, furnish the means of interchange of thought, and create social harmony and good feeling, few have been more successful than the associations known by the name of farmer's clubs. What the agricultural society is to the county, these are in many respects to the neighborhood; and the good results, wherever they have been instituted and sustained, are not less apparent. The effect of such associations does not so much depend on the numbers, as on the spirit, zeal and intelligence of the members, although where the right feeling prevails, the more that combine the better. There are few agricultural neighborhoods where a dozen men cannot be found willing to meet once a month to compare opinions, and communicate the results of their experience and observations.—Even half a dozen, if they are men of the right stamp, will make the meetings of such a club most interesting and instructive. Such meetings are the places to discuss and settle all points of a practical character in agriculture; soils, their qualities, and the crops best adapted to each kind; agricultural implements and their improvement; new theories, and their rationality or practical bearing; questions connected with agricultural reading or education; in short every thing belonging to the farm, the orchard or the garden, will be found a suitable and fruitful topic of remark. Such a club should possess an agricultural library, supported by the contributions of each associate, and open to every member, the books and periodicals to be subject to such regulations as to afford security against loss. The best foreign as well as domestic works on agriculture and its kindred sciences might always be found, and all the most valuable of our periodicals useful to the farmer placed on file for reading or for reference. To each individual the expense would be far less than if his labors for information were alone and unaided, and the mutual advantages greater. Another of the benefits resulting from such an association would, or it might, be the formation of an agricultural museum, embracing specimens of the various soils cultivated by the members, or any of those remarkable for their fertility or otherwise; specimens to illustrate the geological character of the district, and show the bearing this science has on agriculture; specimens of the various kinds of grain and cultivated plants, whether remarkable for size, novelty, or their valuable qualities; fruits, roots, &c. according to the season; together with all such matters as are calculated to interest and instruct a body of men; the whole, as far as possible, to be preserved for the benefit of all. We have merely thrown out these few hints, in the hope that some of our spirited farming neighborhoods may be induced to further develop them and reduce them to practice. Wherever, in Europe or in this country, this or kindred plans have been adopted, the results have been most happy, and the cause of agriculture has received a decided impulse.—*Cultivator.*

CORN COBS.—The most economical method of disposing of corn cobs, is doubtless to pound them up and grind them with corn, for stock.—But as this is often neglected, another excellent mode of disposal is to soak them in pickle and feed them to cows or other cattle in the yard.—A large tub, formed by sawing a hogshead in two, near the middle, should be placed in a convenient place, near the yard, and being filled with cobs, a sufficiency of warm water, strongly impregnated with common salt, should be poured over them to render them soft and palateable to the stock.

Most animals devour them greedily in this state, but when it is not too much trouble, grinding into meal is much preferable. There is but little difference in the value of pure corn meal, and that made of corn and cobs, for feeding most animals. The meal of the cob also makes excellent puddings.—*Maine Cultivator.*

MANAGEMENT OF FARMS.

There are far too many in our community who, relying solely on the present returns of their farms, plant nothing but cotton and corn, and plant with the belief that it is cheaper to buy and clear new lands, than to improve or keep in good heart their present cleared lands. In making our remarks on this subject, we write not from theory, nor from our limited practice, but could make a reference, known to many of our readers, that is as strong in proof of the grounds we take as any thing could be. We hold, what we have oft times repeated, that the farmer who can show a clear gain in a series of 10 or 20 years the greatest, when especially if there be much of it in his real estate, is the best farmer. We furthermore believe it is a subject more important to our friends than any other we could call to their attention, as it includes the whole subject of good farming—excepting due economy in his expenses, and the proper education of his family. This subject not only includes fair crops, good plowing, clean and perfect cultivation, rest of land, rotation of crops, manuring, but the proper care of stock, as to feeding and preparing an abundance of food for every thing, and making quantities of manure. We cannot give the hundredth part of all the minutiæ of plowing and hoeing, planting and gathering, &c. &c.; but will touch on the outlines of a system, *that is acted on*, which is perfectly compatible with a cotton farm, and the only feasible one that we can think of, and we do profess to have given the matter our thoughts in every possible bearing. There is one thing we beg to say, with the wish that our interest should be so construed in our favor, as that our readers will give it their thoughts at least. We read no political work of any description, and seldom talk on politics. Our friends, knowing we are "Berkshire mad," indulge us with conversing on this subject, and we read every day more or less on agriculture, and think on it all the time.

We will take a farm of any dimensions, supposing it be well cleared, with good fences, having enough stock of every description, with tools, &c., and plow horses for one half the hands, which is about usual. Suppose the farm to be 100 acres of cleared land, it being in round numbers and easily divisible. This 100 acres will require 7 hands to cultivate it as is frequently done—9 acres in cotton and 4 in corn, which gives a crop of 6 to 7 bales, and about 125 bushels of corn per hand—4 or 5 horses on the farm. We would advise that the farm be divided into 4 fields of 25 acres each—one planted in cotton, one in corn, one in grain—the fourth to be at almost perfect rest, which will be better explained after awhile.

Three hands, with a horse each, can cultivate this land, and will make the same per hand crop of cotton, with nearly double of corn, and a large per hand crop of grain—place the other hands to clearing, which will enable the farmer to bring into his field one or two more of his hands the second year, and so on until he gets all seven in the field. In the mean time he will necessarily lose a portion of his crop; but as his provision department is so much more ample, he will make more than his crop calls for, as he has been accustomed to. The second year he will plant his rested land in cotton—cotton land in corn, corn land in oats, and his oats land will rest, and so on through the rotation.

By feeding his stock so much better, as his provision will enable him so to do, he will be enabled to manure his corn yearly, at least in the hill. Thus in four years he will have added a little to his permanent improvement. By planting peas in his corn, there will be another addition to his farm every four years; the peas will come up in the spring on his oats field.—This, with the stubble and grass, will be another addition: the rest, together with grass and weeds on this last quarter, will be another addition. Thus we have three-fourths of the farm well manured yearly.

We would, after gathering our corn, turn stock into pea field—say October 1st; herd them nightly in lots, and feed with cotton seed and shucks. They would thus do well until say middle of December—then use the better food at night, and give them access to grain field until 1st of March, by which time the field in rest might, if a favorable season, be used for two months, always removing them in time, that a growth of grass and weeds sufficient to protect the land should be on it before the heats of summer injure the land. The stock may soon be turned into the grain field, or it might be preferable to turn into range, if good, or if not, to feed for a month or so—then, in August and September, back on the rested land. We would thus have dropped in the fields or in the lots all the manure, thereby returning to the land nearly every thing taken off; and if we consider the agency of the atmosphere and gases, carried into the earth by the rains and plowing, we do absolutely give to the land more than we take away. If an individual be out of debt, we hold that before the fourth rotation comes round, he will have made more dollars and cents out of the land, besides having improved his land and stock in value, full 50 to 100 per cent.

We could name a farmer who, in following in the main this system, made last year 130 bales of cotton, and 1500 bushels of corn that he has not been able to consume with twelve hands.—Can this be beaten in the length and breadth of our land? He sells pork, and has the finest and fattest cows we have seen in many a day. Bear this in mind, he has a work horse to every hand, and in a push turns out his cook and follows the fourteenth plow himself. He has more implements than some of our friends who may work twenty-five to thirty hands. Is this not true economy? He, making many of his tools at home, not only feeds double the number of horses, but has as much corn to sell as many make with the same number of hands, and with all this turns his stock into an hundred and fifty acre field of grain, not having cut more than will give him seed, gathers peas enough to plant not only his corn field, but to sow down 40 or 50 acres of pasture land, with ½ bushel per acre. We rejoice more in ferreting out this *brother* of ours, than we have for a length of time at any thing—as we have a living witness that we are not half so "Berkshire mad" as many of our shovel-plow, hoe-working good folks of the "ancient regime" would have us be. We know full well that were we to give all we saw and heard in spending at that place a few hours, that many cross masters would lay down their rod of dignity, and begin to learn. We have thought this matter to be so plain, "that the wayfaring man, though a fool, shall not err therein;" it appears to us to carry a demonstration with it, as self-evident as that a straight line is the shortest distance between two given points, or that two sides of any triangle is greater than the third. But as evident as this appears to us, there are those who believe to the contrary, and are putting good farms into the very condition of those they left in their native land—which farms are now being improved at a cost far exceeding the value of ours. Will they not learn a lesson ere it be too late. Will they continue to rob their children, and drive them to distant lands, as they have been driven by their forefathers, who had not the same lights that we all have now? We trust not, we hope not, we believe not. 'Tis for this that we now labor, while many, probably all, of our industrious readers are in bed.—*Southwestern Farmer.*

HEAVES—Do you know of any effectual remedy for heaves in horses? If not, perhaps you may consider what follows as worth nothing. I have a valuable horse—one of a pair—which threatened, more than a year ago, to become utterly useless in consequence of this complaint. At the expiration of the last grass season, I was induced to try top-stalks instead of hay, and the result has been that the animal is entirely relieved, nor have I the least expectation that the disease will recur to any extent, so long as this diet is adhered to. Permit me to add, that I have for years been in the practice of giving my horses each an ounce of fine salt every other day; and that I have good reasons for believing that their health is greatly promoted by it. In reference to stalk fodder for horses, I should like to inquire through your paper, of southern gentlemen, whether in that part of the country where hay is not made, they ever have heaves among their horses. If they do not, I shall consider my experiment conclusive.—*Albany Cult.*

TRANSPLANTING TREES.

Success in transplanting trees depends much on the treatment they receive in that operation. On removing the trees from the nursery, care should be taken to prevent the roots from drying previously to planting them, otherwise they may receive considerable injury; and when they are to be transported to a distance, particular care should be taken to preserve them from drying winds before packing. Immediately on their receipt the bundles should be unpacked, the roots well watered and "laid in" until the ground in which they are to be planted be ready to receive them. By laying in, is to be understood the making of a trench sufficiently large to admit the roots, into which they are placed; the earth having been previously made fine is then filled in around them and a gentle watering given, in which situation they may remain with safety until planted.

The holes in which it is intended to plant them, should, for an ordinary sized nursery tree, be from 2½ to 3 feet in diameter, and about the same depth; the earth from the bottom should be thrown aside, the place filled up with good compost or black mould, (no fresh stable manure should be used in the compost.) The tree should be planted one or two inches deeper than it stood in the nursery, the roots and fibres being spread out horizontally, and during the process of filling in the earth, the tree should be shaken several times to admit the soil between the roots, and also to fill up any cavities that might otherwise remain. The earth should then be trodden down and gently watered; in a short time it will have settled, and any hollows that may have formed, should be filled up—finishing by forming a basin around the trench to receive the rain or watering which it may be necessary to give it, if the ensuing season should prove dry; to prevent the winds from loosening the earth around the roots, the tree should be secured to a stake by bands of straw.

The proper season for transplanting trees in this latitude, is from the middle of October to the first or middle of May. Trees transplanted in autumn should have the roots a little protected during the first and most trying winter. This protection may consist of a few inches of litter from the stable, placed around their trunks and over their roots. Moss from the meadows or evergreen boughs are, however, preferable for delicate plants, as these substances, being almost incorruptible, never injure what they were designed to protect.

"We have observed," says the Genesee Farmer, "in regard to transplanting fruit trees, that we have rarely lost one that stood in cultivated ground, where the hoe was introduced several times in the course of the summer; but on the contrary, where the trees were set in grassy land, or where the cultivation was neglected, our losses have been considerable. We therefore advise, in order to secure the safety of such as have been planted out, either in the last autumn or spring, to have the ground well hoed round them once a month; and if it be done every fortnight, it will be still better. The labor will not differ very materially from hoeing a hill of corn. It is worthy of notice, however, that the oftener it is done the easier it is to do—because the soil will be kept loose and mellow.

"To water trees in that condition may sometimes be useful; but we are not free to recommend it very highly. A loamy soil that is much watered soon becomes hard; the surface is glazed, rendered in a great measure impermeable to the air, and is consequently no longer

capable of affording, in dry weather, the necessary nourishment to the plant. The sources of its fertility are obstructed. This may be better understood by some of our readers, when we state on the authority of Sir Humphrey Davy, that a soil in the greatest degree absorbent, exposed to the atmosphere till it becomes dry to the touch, still contains moisture equal to one-eighth part of its whole weight. This is discoverable by subjecting it to a heat indicated by 300 degrees of Farenheit's thermometer. Now all water not chemically combined, but only *adhering* to parts of the soil, is in constant use in vegetation: and the one-eighth part referred to is of this kind. If we estimate common fertile soils, however, as containing only one-twelfth part, then in 400 pounds of soil, even when it is dry to the touch, we shall have 33 pounds of water in store for the use of vegetation; and it is particularly worthy of notice, that such soils, when deprived of a portion of this by plants, procure a fresh supply *by constantly absorbing water from the atmosphere*, where it exists in the state of vapor. In effect a good soil is a perpetual fountain, even in dry weather.

"From these statements it must be evident, that unless the ground is frequently cultivated and kept mellow, so that between its particles the air can pass in, the latter cannot impart the moisture which it holds in solution; but when the soil is freshly broken, minutely divided, and prevented from conglomerating, these invisible springs are preserved in order, and plants that drink from them will long resist the drought.—Let the hoe, then, be freely and frequently used.

Mississippi Valley Farmer.

WHAT IS THE BEST MODE OF HARNESSING OXEN?

Mr. Breck—In your paper of last week, there is an article taken from the "Miss ssippi Valley Farmer," on the "Value of Oxen," which I have read with great pleasure. I find in that article the following paragraph:

"The value of the ox for labor is much increased by substituting the collar and traces for the common wooden yoke and bows. The horse collar *reversed*, or turned the bottom up, makes an exact fit for the neck of the ox, if it be made of a suitable size. We have been assured by those who have adopted this method of gearing, that it has with them a decided preference over the common method. The following are some of the advantages: Whether the oxen be geared singly or in pairs, they travel with more ease to themselves; and there is consequently an increase of speed in travelling; there is less liability to chafe and gall, and what many would consider the most important advantage, there is an addition to the strength of draft of at least ten per cent."

I have often wondered when seeing the patient ox with his head bowed down, and his neck overloaded with a heavy yoke, why this barbarous and inconvenient mode of gearing him was kept up—the most awkward and ungainly mode of tackling, if it may be so called, in the whole economy of farming.

It seems that gearing with a collar has the advantages mentioned by the intelligent editor of the Farmer, and it strikes me there are others that he has not mentioned: they are, that the collar allows more perfect freedom for the head, and therefore there must be greater ease in travelling. The collar, too, spreads the draft over a greater surface, and brings the draft in the right place; and if the gearing has also breeching straps behind, the load is prevented from coming on the heels of the cattle in going down hill.

I wish some one of your intelligent and observing correspondents would enlighten us on this subject, and, if possible, give us the results of their experiments. I believe a better, safer, more comfortable, more convenient, and in the long run, cheaper mode, could be devised, for tackling this useful animal. Many a time when he is goaded along and vexed with vituperation, he is suffering from a chafed neck, rendered callous almost by the constant action of the heavy yoke, but not so callous as not to be galling and oppressive to his neck.

If this mode, too, will allow of working him single, and his gait can be improved, so that he will walk faster, and release his head from the pounds of wood he carries, (and I think such improvement can be made,) why not adopt it?

Why will not some agriculturist who has a yoke or two of oxen, try the experiment? Why will not others start in this matter? What are the objections to the collar for oxen? What are the advantages of the old mode, or rather present mode of attaching him to his load? Why should it be persisted in? Will some of your correspondents, I ask again, enlighten us on this subject? Yours, truly,

A Cultivator.

Remarks by the Editor.—The customs and usages of our fathers, in relation to the modes of operation in farming, have been followed by the children with as much obstinacy as though their usages and opinions were infallible and could not be improved upon, and to doubt the soundness of their views, would be denounced almost as heresy; but it is gratifying to know that a spirit of inquiry is abroad, and that not only the children but the fathers, are beginning to look around and inquire, how can we improve upon the past and the present mode of cultivation? How can we add to the comfort, and increase the profit and improve the beauty of our animals? &c. "A Cultivator" has made some interesting inquiries, which we hope some one who has experience in the management of oxen will answer. We have often been inclined to believe that an easier mode of drawing than by the wooden yoke, might be adopted, but as we have had but little experience in this matter, it does not become us to suggest the improvement. It would be rather hard, we think, to bring into general use any other fashion than the yoke, even though it should be proved that the collar was the best; but will not some one make the experiment of the collar, as well as answer the inquiries of "A Cultivator."

New England Farmer.

SMALL FARMS.

We are glad that the farmers throughout the country are discussing this subject with so much interest and earnestness.

For a long time we have indulged in extravagant fancies in every thing. Large possessions and large wealth—these are counted essential, and few were the men who could toil contentedly on small farms, and be satisfied with a limited business; but the experience of the last few years has taught us all that money, beyond that point which secures us independence, is not an element of happiness or progress. When sought for, for its own sake, it is ever a means of evil. Nor can it be otherwise if grasped at to gratify a low, sordid ambition. These truths have made slow, but sure, progress among all classes; yet among none more than the agricultural interests of the land.

We may mention the growing disposition on the part of farmers to possess only as much land as they can cultivate well, as proof of these remarks. And we cannot but rejoice at it.—For, if rightly directed, their influence will ever be exerted for the substantial good of all—since it possesses, from a variety of causes, that admixture of wisdom and prudence, which is unwilling to run foolish risks, or try hazardous experiment in governments, or the policy of government, yet which is never backward in making changes whenever, in reason, they are called for, or urging reforms when existing evils demand them. Just views at home insure just views generally, with regard to every thing else. And when the farming interests practise on their own soil whatever a wise economy, comfort and real independence may demand, we may feel assured, not only that their influence will be rightly directed, but that they will see to it that those virtues are practised in our public affairs.

And as a general rule, the possession of as much land as may be well cultivated will help to establish these virtues. First, the farmer who is so situated can apply his industry better; second, he can employ all his capital, he can do no more, and obtain a surer and steadier return from both; third, he can secure more of those comforts which tend so much to improve and civilize all of us—a good dwelling, good outhouses, good fences, good cattle, greater fertility of soil, and better knowledge of his business. Nor is this all. When men measure themselves thus, by what they can do, and are zealous to do it, they are not so apt to be led astray by speculation, by avarice, by social display, or any of that class of evils which so much disturb and distress society. They love the earth they till, they are content to till it, being proud of the labor of their hands; they find and feel under these circumstances, that they can do more good to others, and enjoy themselves better, because necessarily they will look more to what is *in* a man than what is *around* him, to character, rather than to the number of acres he may own, or the wealth he may possess.

It is a national blessing, in every way, to multiply small farms. Show us a state that has the most of them, and we will guarantee to find there the greatest amount of substantial wealth and real happiness. Economy, it is said, is a mine of wealth. Energy is the means to supply this mine; and as the truest economy and the stoutest energy are employed on them, the more small farmers we have, the greater will be the strength and wealth of the nation.—*Ex. paper.*

Great Yield of Wheat.—The following note from from Mr. Dickinson, of Onodaga Hollow, will show the course adopted by him in producing his crop of 52½ bushels of wheat per acre, the present season. There can be little doubt that much more labor is expended in producing the wheat crop generally, than would be necessary if the grounds were properly prepared once for all, made clean, and kept clean, so as not to require fallowing as cleaning process. We have as yet heard of no yield this year that has exceeded this.

W. Gaylord, Esq.—I send you a hasty account of the preparatory treatment, nature of the soil, &c., in the case of the wheat crop to which allusion has been made. Two years since, this month, I purchased the farm on which I reside, and commenced working it the next spring. There had been no clover seed used on the place by the occupant before me, except on the lot where the wheat was grown by me. The field had a crop off oats taken off, and was then seeded to clover. In the spring when I came on the farm, the clover was small and thin, and I sowed on it 1½ bushels of plaster per acre. The second week in July, I mowed off the clover for hay. The last of August, I plowed in a large growth of clover, and harrowed it thoroughly. On the 6th and 7th of September, I sowed on one bushel and three pecks of Canada flint wheat to the acre, and harrowed it in. The soil is a friable black slate or loam. The wheat in the whole field was remarkably equal, and the crop per acre as stated.

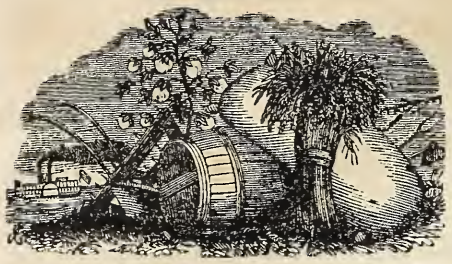
Yours, truly, O. Dickinson.

Onondaga, September 12, 1843.

Albany Cultivator.

We have always thought that the product of wheat, per acre, was susceptible of being brought up to from 40 to 50 bushels, and the occasional yields which we hear of above that standard, serves but to confirm us in our opinion; and we are sure that by proper care in the pulverization and preparation of the soil, and a liberal sowing of seed, that that amount of product can be attained.—*American Farmer.*

Hardened round us, encasing wholly every notion we form, is a wrappage of traditions, hearsays, mere words: we call that fire of the black thunder-cloud electricity, and lecture learnedly about it, and grind the like of it out of glass and silk; but what is it? Whence comes it? Where goes it?—*Carlyle.*



WEDNESDAY, NOVEMBER 22, 1843.

BACK NUMBERS.—All new subscribers to the "Southern Cultivator" can be supplied with the back numbers.

OUR SECOND VOLUME.

The first volume of the "SOUTHERN CULTIVATOR" is drawing rapidly to a close—only two more numbers will be required to complete it—when we shall enter upon the second. It is, therefore, a fit and appropriate occasion for us to make an appeal to the Agriculturists of the South, to stand by, and aid and sustain us in the enterprise. We do not appeal alone to the agriculturists, but we appeal to every friend of agriculture, to lend his aid in sustaining the work. Prompted by an earnest solicitude for the improvement of the system of agriculture in our native State, as well as the entire South, we entered upon the publication of the work, hoping rather to make it an acceptable medium of communication for the planters of the South, than the vehicle for diffusing our own crude ideas upon the subject of agriculture. We had long felt the necessity for such a work—a work adapted and devoted to the promotion and improvement of Southern agriculture, while it should be afforded so cheap as to place it within the reach of every planter—and feeling rather mortified at the reflection that the entire South furnished no such work, we determined to embark in the enterprise—to make the experiment—and see whether the planters and friends of agriculture, for whose immediate benefit it was designed, would sustain us in our efforts. Thus far, although the patronage extended to the present volume has quite equalled, if not surpassed, our expectations, it has been barely sufficient to defray the actual cost of publication—affording us no remuneration for our own labor and attention. It remains, therefore, with the planters to determine whether this state of things shall continue; to determine, in short, whether "*the laborer is worthy of his hire*," and, if so, to mete out to him even handed justice. It has been aptly and truly said, that "it is the reward, or the hope thereof, which sweetens labor," and as we are not yet enabled to gather together and count the fruits of our labors in this behalf, we invoke the friends of agriculture to extend to us such aid in the circulation of our paper, as they may deem it worthy to receive at their hands. We have every disposition, and are entirely willing, to toil on in behalf of the interests, and for the improvement of the condition, both morally and physically, of our own native South; but, as the well tempered steel cannot resist too much tension, we, too, must yield when too great a burthen is imposed. We cannot, therefore, prosecute a labor which holds out to us no inducement in the shape of reward; and we are quite sure the generous and noble hearted planters do not desire such a sacrifice of time and labor at our hands, but rather that they desire to see us amply, yea, abundantly and liberally, rewarded. With a perfect conviction that this is the feeling of every friend who has read or seen the "SOUTHERN CULTIVATOR," we shall enter upon the publication of the second volume, indulging the sanguine hope that our efforts in behalf of the great agricultural interest of the South will not go unrewarded, but that our friends will lend their efforts to extend its circulation and increase its usefulness. Satisfied that this is the feeling among the planters who have read the work, we feel no delicacy in asking each of our present patrons, to imagine us before them in person, with hat in hand, and, after having made our best bow, soliciting them to call and see their neighbors, and ascertain if they, too, will not become subscribers to the "Southern Cultivator." And allow us to assure you, if each of you succeed in obtaining only one subscriber, you will afford us such relief as will make our heart leap for joy. Some of you can get two, some ten, and others twenty, if you will only make a little exertion. Will you not, then, unite your energies in behalf of the Cultivator, the cause of agriculture, and your own interests? We hope you will; indeed, we had almost said we know you will. The price of subscription is only ONE DOLLAR per year, as you all know—a price which every planter can afford to pay; and as every planter who studies his own interest, ought, in justice to that interest, to take an agricultural paper, we hope that all such planters will have their names enrolled on our subscription list. We need not trespass upon the consideration and indulgence of our friends, the Agricultural Clubs of the State, for we feel quite assured that they will not neglect us in this hour of need.

CLUBS.

We remark, in conclusion, that in order to offer every inducement to clubs to subscribe, the following terms will, in future, be adopted:

6	copies	for	$5 00
25	"	"	20 00
100	"	"	75 00

These terms, certainly, should meet the approbation of every friend of the work, and, we trust, will excite an increased zeal in its behalf.—With these remarks, we commit the work to the hands of its friends.

☞ We hope that those papers with which we exchange, will copy the foregoing, with such comments as they may deem proper.

FOURTH CROP OF APPLES.—The Alabama Monitor says, "We have seen a lot of apples from the plantation of Mrs. Colter, of Pickens county, of the fourth crop this season. Since the first bearing in June, three other crops of blossoms have matured into fruit. We noticed a little branch on which was a cluster of six apples, from the size of a guinea egg to that of a plum, all perfectly ripe.

Last year our fellow citizen, Capt. Dearing, produced a third crop of apples from the same tree, a circumstance generally noticed in the public prints as very rare; but it seems a Lady-horticulturist has done still better, and no doubt attained the utmost limit in apple crops.

BOMMER'S MANURE.

We have just received a letter from Mr. CHARLES BAER, an agent for vending the paten for making manure by this system, who informs us that he will be in this city in the course of ten days, for the purpose of selling rights, when he will, for a slight additional compensation, go on to the plantation of any gentleman who may purchase a right, and instruct him, or his overseer, how to make the manure. Gentlemen desirous to purchase rights, or to avail themselves of his instructions, will please leave notices at this office.

WHITE PLAINS, Greene County, November 19, 1843.

To the Editors of the Southern Cultivator:

Gentlemen:—I some time since addressed you a letter in which I promised shortly to give you an account of my hogs, &c. I have been long waiting for the portrait of my boar Rip Van Winkle, to head said publication with. I have lately heard it was shipped from New York, and if not lost on the way, you will shortly hear from me again.

Not long since I saw an inquiry in your paper from a gentleman in Athens, relative to the barrenness of sows, &c., and asking your correspondents what to do with one to make her breed.

I was similarly situated with himself, and had adopted your recommendation, to wit: reducing her, but without any effect. Mine was an exceedingly fine Berkshire sow, purchased of Mr. C. N Bement, with a thorough knowledge that she did not or had not produced pigs, nor *been in pig*, although nearly three years old. She was regularly in season for the boars every 18 to 21 days, from November 6, 1842, to June, 1843, and was as *regularly* served by *different* boars, but to no *use* or *effect*. By the latter time I had reduced her quite poor; I then concluded to try experiments on her, and about 10th June, half spayed her, or, in other words, took out one of her prides. In July afterwards, (about 25th) I found her again in season for the boar, and put her in the pen to my imported boar Ontario, and I am pleased to say, she not only proved in pig, but on the 13th instant, produced me six fine pigs. I would also state that her condition was about the same it had been for several months, and the management the same, and she had on *former occasions* been served by the same boar. I would advise your correspondent to make the experiment, and hope he will meet with the same success. While writing, I will remark, that I am selling all the Berkshire pigs *I can raise* from *twenty sows*, and that I last Saturday sold to Mr. James M. Crook, of Benton county, Alabama, a lot of ten fine pigs. They consist of three boars and seven sows, and are of choice selections. Persons in that vicinity wishing to see *genuine Berkshires* can *now do so* by calling on Mr. Crook. Hoping that your subscription list for another year may receive

that encouragement which *it deserves*, and that every planter in Georgia will do his duty and remit you *his dollar*,

I remain, as ever, truly yours,

JOHN BONNER.

AN EXPERIMENT.—We had, says the Charleston Rambler, the gratification of being present on Friday, the 20th ult., at the breaking in and measuring of an acre of corn at "Geddes' Hall," the plantation of Capt. G. C. Geddes, of St. Andrews. It was cultivated as an experiment, as follows, on land exceedingly poor, and which would not, in the ordinary culture, produce more than 7 bushels per acre. The acre alluded to, was laid out in beds 5 feet apart, the seed planted in double rows, 20 inches apart diagonally—no manure was used before the seed was in the ground. When the corn was 5 or 6 inches out of the ground, it was manured with *live cotton seed*. As soon as the cotton seed began to sprout, it was hoed and turned under.—When the corn was a foot high, it was again fed on the surface with well-rotted manure, from the lower layer of the cow-pen, well saturated with ammonia. The basis of the manure used, was salt marsh and sedge. The single acre treated as above, produced 68 bushels.

In the Southern Transcript, published at Alexandria, La., we find an account of a pumpkin, raised by Smith W. Gordon, Esq., of the parish of Rapides, weighing 186 pounds.

EXPLANATION OF TERMS.

We give, says the Mississippi Valley Farmer, the following explanation of terms, for the benefit of our junior readers, and those young and inexperienced farmers who have not made themselves familiar with the technical terms in use among agricultural writers.

1. *Broadcast Husbandry*—is that in which the grain or seed is sown by a cast of the hand, so as to be strewed equally as possible over the whole ground.

2. *Drill Husbandry*—is that in which the grain or seed is sown in rows, by means of machines contrived for that purpose, and the ground afterwards kept stirred and cleared of weeds by a kind of plow called the horse-hoe, hence sometimes called the *horse-hoeing husbandry*.

3. *Convertible Husbandry*—is when the ground is cultivated alternately in tillage and grass.

This is much practised in some parts of the country, with wheat and clover. A field in clover, soon after haying, is turned up and sowed with wheat and clover seed. After the wheat is taken off, it is once mowed, when it is again plowed up and sowed as before; thus the ground carries wheat every other year, and the intermediate years clover. The term applies also to a succession of any kind of crops in which grass is comprehended as one.

4. *Trench Plowing*—is running the plow twice in the same furrow.

In doing this the top soil, with all its foul seeds, is cast to the bottom of the trench, and a new soil is thrown up, upon which the sun had never before shed its rays. It is done sometimes at one operation, by a plow constructed for the purpose, called a *trench plow*.

5. *Horizontal Plowing*—is so conducted, by the use of an instrument called "rafter level," as to lay the sides of hills in horizontal *beds*, about six feet wide, with deep hollows or water furrows between, for the purpose of retaining the rains.

6. *Indigenous Plants*—are such as are natives of the country in which they are found, or grow.

Thus, maize, the potatoe, and tobacco, are called indigenous to America, having first been found here, and from America introduced into Europe.

7. *Exotic Plants*—are such as are natives of foreign countries.

Such as the lemon tree, and many others, when introduced into the New England States, and cultivated in hot houses.

8. *Annual Plants*—are such as are of but one year's duration.

Such are most of our garden plants and all others growing from seed sown in the spring, which arrive at maturity in the summer or autumn following, producing flowers and ripe seed, and which afterwards perish both in their *top and roots*.

9. *Biennial Plants*—are such as, in their roots at least, are of two years duration.

Many of these plants perish in the *top* the first year, but live in their root through the winter, and the second year shoot up stalks, flower, produce seed, and afterwards perish both in root and branch. Such are the parsnep, carrot, &c.

10. *Perennial Plants*—are of many years duration.

Such are all plants, whether the leaves and stalks perish annually or not, provided the *roots are of many years duration*, as the horse-radish, burdock, &c.

11. *Herbaceous Plants*—are those whose herb, that is, whose stem and branches are of but one year's duration, whether the root be annual, biennial, or perennial.

12. *Esculent Plants*—are such as are replete with nutritious matter, consequently, proper for being eaten as food.

Such as parsneps, carrots, cabbage, beets, and various others of a similar nature.

13. *Umbelliferous Plants*—are all such as produce their flowers on the ends of numerous little flower stalks or rays, nearly equal in length, spreading from a common point or centre, forming a level, usually convex or globose surface, somewhat like a spread umbrella, as the parsnep, carrot, &c.

14. *Leguminous Plants*—are those of the pulse kind, which, producing their seed in pods, may be gathered by the hand, as peas, beans, &c.

15. *Culmiferous Plants*—are all such as have smooth pointed stems, and whose seeds are enclosed in chaffy husks or coverings.

All the grains, and most of the grasses, as well as many other plants, are of this kind.

16. *Deciduous Plants*—are all such plants, whether of the tree or shrub kind, as shed or loose their leaves in the autumnal or winter seasons.

17. *Tuberos Roots*—are such as consist of one or more knobbed tubes, of a solid, fleshy substance, as the potatoe, artichoke, &c.

18. *Bulbous Roots*—are such as have a roundish, swelling, bulbous form, composed of numerous scales or coats, as the onion, garlic, &c.

19. *Tap Roots*—are such as in the form of a tap descend down into the ground in a perpendicular direction, as the carrot, parsnep, red clover, &c.

20. *Fibrous Roots*—are such as are wholly composed of numerous thready or fibrous parts, such as the roots of all kinds of grain.

21. *Radicals* or *Radicles*—in botany, are the small fibrous roots, which extend themselves in every direction in the earth for the purpose of collecting nourishment for the support of the plant.

22. *Green Crops*—are such as continue green while ripening their seed, or till taken off the ground; such as beans, peas, cabbage, carrots, turneps, &c.

23. *White Crops*—are such as become bleached, or turn white and dry while ripening their seed; such are all the various kinds of grain.

All plants, while their leaves continue green, and especially such as have large leaves, draw much of their nourishment from the atmosphere. The *green crops*, therefore, exhaust the soil much less than the *white crops*, whose leaves becoming dry receive nothing from the atmosphere, but draw all their support from the soil while ripening their seed.

MODEL FARM.

The British Farmers' Magazine for January, 1843, contains the following account of a model farm, cultivated chiefly by boys who are pursuing a course of education in scientific agriculture:

"Perhaps the most successful example of the capabilities of land, under proper management, in Ireland, and of the immense crops which can be raised, may be seen on the National Model Farm, under the Board of Education, at Glansuevin, near Dublin. This farm, strictly conducted on the improved system of green cropping and house feeding, contains 52 statute acres, and there were on it, during the year, 22 head of cattle and three horses. It supplies on an average, ninety persons during the year with farm produce, such as milk, butter, potatoes and vegetables of various kinds! and furnishes the farming establishment with pork, besides a number of private families with the above articles. A considerable quantity of vegetables is carried to market, and all kinds of grain, which is abundant. There is at present a crop of oats upon the farm, the produce of 14½ British acres. It is secured in eight stacks, and is estimated by the best judges to be equal to the average produce of 50 acres. It stood pertectly close upon the ground, averaged 6 to 7½ feet in height, the head and ear corresponding; the other crops, potatoes, turneps, Italian rye grass, &c. of the like quality.

The manager conducts the farm on his own account; pays £256 7s. 8d. per annum for rent, besides other expenses, amounting in all to upwards of £400 per year; and we are informed, and believe, that he realizes a very handsome annual sum from it besides. He labors and manages it almost exclusively by a number of boys, agricultural pupils, and teachers, who are there in training in the science and practice of agriculture. As a test of what land is capable of producing, when brought to its highest point, there are few examples so appropriate as we have in this particular instance; more cattle kept and fed, more human beings supplied with the common necessaries of life, more manure accumulated, more employment given, and, in fact, more money made on this spot of land, than on any other farm of the same extent (conducted on a proper scientific rotation of grain and green crop,) in any part of the empire, or the world. Did the average land of Ireland produce only one half of the value, according to quantity, that is on this model farm, we should hear no more of corn laws, tariffs, or want of employment among the people.

EIGHT THINGS THAT DO NOT LOOK WELL.

It does not look well to let the garden grow up to weeds, and then say that a garden is good for nothing.

It does not look well to have the gate without hinges, held up in the gateway by a prop in a "slantindicular" position, leaving at the bottom an aperture through which some hog with a convenient nose can rub, and so slip around into the garden.

It does not look well for a man to thump and abuse his horses or oxen, just to try his whip; or to suffer his boys to do so.

It does not look well to keep the horse in a stable not cleaned, till his hind feet are 45 degrees higher than his fore feet, so that he is obliged to rear up to get himself on a level every time he wishes to swallow a little hay or oats.

It does not look well to have the woman hang out the clothes on rough and thorny bushes, and tear them in getting them off, when a neat line would save that trouble.

It does not look well for a man to keep six lank, hungry grey-hounds, when he can keep no cow or pig; and for no purpose but to worry the neighbors' cattle, and annoy the neighborhood with continual barking.

It does not look well for farmers' daughters to be always talking about piano playing and the trillings of Signor Cantanini; while they do not

know of what butter is made, and pretend to suppose a cow a rhinoceros.

It does not look well for any body's daughters to walk the streets in kid slippers in December, and lace themselves so cruelly that their voices waste away, and their cheeks turn to the color of moonlight.—*Prairie Farmer.*

ACID IN SOILS.—It has become mooted questions of late, whether there be acid in the soil? and if there be, whether lime will so neutralize it as to destroy *sorrel* and other sour vegetables? Some have affirmed that the doctrine which ascribes vegetable acid, or, as it is chemically termed, oxalic acid, as the cause of the growth of sorrel, is unsound; others, that sorrel cannot be destroyed by the application of lime. Now, for ourself, from our own experience, we are forced to believe, that there is truth both in the fact of the existence of the acid, and in the competency of lime, as a neutralizer, to remove it. Our reason for this opinion is a plain one and soon told. We had some years ago a lot of about two acres of sandy land, resting upon a clay bottom, so infested with sorrel as to destroy two successive crops of clover. The land had never been limed, and believing that the presence of the sorrel was owing to a superabundant supply of acid in the soil, we determined to try the effect in neutralizing it, and it so turned out that we had some *freshly burned, unslacked oyster shell lime on hand*, two hundred bushels of which we spread over the two acres of ground, on the top of the lay of sorrel, for it was several inches high; plowed both the lime and the sorrel in on the 20th of July, and on the 15th of August following, we gave the ground another plowing, returning the lime to the surface, which had become tolerably well slacked. We let the lot remain until the following spring, when we sowed it in oats and clover, and we were never again troubled with our old enemy the sorrel.—As there has been considerable discussion of late upon this subject, and no little diversity of opinion upon this matter, we have thought that it might be interesting to our readers to know the views entertained by that eminent chemist, Professor Dana, of Lowell, Massachusetts, whose admirable work upon agriculture, shows that *his* opinion is entitled to profound consideration. It has been alleged in support of the position, that lime will not destroy sorrel, that in many instances where lime had been applied to the soil, that the sorrel continued to grow, and even that in some instances it had grown through coatings of marl, which is mainly the carbonate of lime, or, to speak more plainly, lime in a slacked state. This, we think, is very plainly and satisfactorily accounted for by Professor Dana. His views are, that the lime should be plowed in, in an unslacked state, and not be left on the surface to become slacked by the elements; that the vegetable acid of the soil reaches much deeper than the minute portions of the lime which is dissolved by rain can penetrate; that if the slacking takes place by air alone, that, as carbonate of lime is insoluble, none of its active neutralizing principles can enter the soil, and, therefore, cannot effect the sorrel, unless, perhaps, by preparing it, through the vegetable matter which it may have caused to decompose, additional food, by which its capacity for sustaining life is increased rather than diminished. This is our reading of the Dr.'s communication, and as his *theory* corresponds with our own *practice*, we feel justified in commending his views to public notice.—*A. Farm.*

THE PRICE OF GLORY.—A writer in the last number of Blackwood estimates the numbers left dead on Napoleon's fields of battle at one million eight hundred and eleven thousand!

AUGUSTA MARKET.

TUESDAY, NOV. 21—P. M.

Cotton—Our market for the last two days has assumed a very quiet aspect, as both holders and buyers seem disposed to await the receipt of later accounts from Europe, which will be due here by to-morrow's mail. Prices, however, are very firm, and we quote 6 to 7¾c as extremes—principal sales 7 to 7¼c. Square bales are quite in demand, and generally command ¼c more than round of the same quality.

Dry Goods, Groceries, &c.—Our dealers are generally well supplied with heavy and well selected stocks of goods in their respecti e lines, and prices generally range very low for all staple articles.

Exchange—Sight checks are abundant on Savannah, Charleston and New York at par.—Central money is quite firm at 5 to 7 ℘ cent discount. We hear of no transactions in State Bonds, which are very firm and tending upward.

AUGUSTA PRICES CURRENT.

BAGGING, Hemp	yd.	16	@	20
Tow	"	15	@	18
Gunny	"	18½	@	19
BALE ROPE	lb.	6	@	10
BACON, Hog Round	"	5	@	6½
Hams	"	8	@	10
Shoulders	"	4	@	7
Sides	"	6	@	8
COFFEE, Green prime Cuba,	"	9	@	10
Ordinary to Good	"	7	@	9
St. Domingo	"	7	@	9
Rio	"	9	@	10
Laguira	"	9	@	10
Porto Rico	"	9	@	10
Java	"	11	@	14
CORN	bush.	33	@	40
FLOUR, Canal	bbl.	5 75	@	6 50
Baltimore	"	none.		
Western	"	none.		
Country	"	4 00	@	5 50
FEATHERS	lb.	30	@	37½
IRON, Russia	cwt.	4 50	@	5 00
Swedes, assorted	"	4 50	@	5 00
Hoop	"	7 00	@	8 00
Sheet	"	7 00	@	8 00
Nail Rods	"	7 00	@	8 00
LEATHER, Sole	lb.	23	@	28
Upper	side	1 50	@	2 00
Calf Skins	doz.	18 00	@	36 00
MOLASSES, N. Orleans	gal.	31	@	35
Havana	"	25	@	30
NAILS	lb.	4¾	@	6
OATS	bush.	37½	@	50
PEAS	"	40	@	50
SUGAR, New Orleans	lb.	6	@	9½
Havana, white	"	11	@	12
" brown	"	7	@	8
Muscovado	"	7	@	9
St. Croix	"	8	@	11
Porto Rico	"	7	@	9
Lump	"	14	@	16
Loaf	"	15	@	20
Double Refined	"	12	@	13
SALT, Liverpool ground	bush.	45	@	50
" "	sack	1 75	@	2 00
STEEL, German	lb.	15	@	16
Blistered	"	8	@	12½
TWINE	"	20	@	25
TEA, Behea	"	50	@	75
Souchong	"	60	@	75
Hyson	"	80	@	1 25
Gunpowder	"	1 00	@	1 25

CONTENTS OF THIS NUMBER.

	PAGE.
Preparation and Use of Manures, concluded	185
Farmers' Clubs; Corn Cobs	187
Management of Farms; Heaves; Transplanting Trees	188
Best Mode of Harnessing Oxen; Small Farms; Great Yield of Wheat	189
Our Second Volume; Fourth Crop of Apples; Bommer's Manure; Remedy for Barrenness in Sows	190
An Experiment; Large Pumpkin; Explanation of Terms; Model Farm; Eight things that do not look well	191
Acid in Soils	192

GARDEN AND FIELD SEED.

A GENERAL assortment of fresh and genuine GARDEN and FIELD SEED, among which are the following:

Red and White Clover,
Blue and Green Grass,
Rye and Orchard do.,
Timothy and Herds do.,
Millet and Lucerne do.,
Seed Corn of every valuable variety,
Seed Wheat,
Buckwheat and Potato Oats,

Kept constantly on hand by the subscriber, all of which are offered for sale at very moderate prices. All orders, by mail or otherwise, executed with neatness and despatch.

WM. HAINES, JR.,
No. 232 Broad street, Augusta, Ga.
August 30. 18–tf

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A SUPPLY of the following varieties of fresh TURNEP SEED just received, viz:

Yellow Sweedish or Ruta Baga, very fine for stock,
Large Globe Turnep, } Fine
" White Flat do. } for
" Hanover or White Ruta Baga do } table
" Norfolk do. } use.

For sale in quantities to suit purchasers, by
Aug. 30 18–tf WM. HAINES, JR.

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THE undersigned is the Agent of Messrs. Abbett & Co., for vending rights to individuals for making and using the above named Manure. By reference to the following advertisement of Messrs. Abbett & Co., the prices may be ascertained. All orders addressed to me, *post paid*, at Sparta, Ga., will receive prompt attention.
Aug. 30. 18–tf R. S. HARDWICK.

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WHICH teaches how to make vegetable manure without the aid of live stock, in from 15 to 30 days, by a course of humid fermentation set into action at a cost of from 50 cts to $4.

And also to make Compost *in a few days*. And how to make a rich fertilizing liquid called "purin," having all the strength without the acrid qualities of urine.

With the view of graduating the cost to the quantity of land upon which it may be desired to use the method, the following scale of prices has been adopted, viz:

For Gardens of any extent $6
Farms up to 100 acres 10
" from 100 to 200 acres 15
" " 200 to 300 " 18
" " 300 to 400 " 20
" over 400 acres in any one farm 25

By the remittance of the sum here specified, a copy of the method will be sent by mail or in any other mode proposed by the purchaser.

All letters of inquiry must be post paid.
ABBETT & CO., Baltimore,
Proprietors of the patent right for the Southern and Western States. aug 16

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SOUTHERN CULTIVATOR.

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From the S. C. Temperance Advocate.

RUFFIN'S REMARKS ON THE INDIAN PEA,

And other Manuring Crops and Forage Crops.

To the Farmers' Society of Pendleton:

Gentlemen—When at your called meeting on the 26th inst., you requested me to deliver an address at your approaching annual meeting, I was compelled to decline the honorable service, by several considerations, which it is unnecessary to repeat. But though unwilling to attempt, at such short notice, and amidst other and uncertain calls of duty and business, to undertake so formal a matter as a regular *address*, it has occurred to me that possibly I may in some degree meet your wishes in another mode, in which the absence of all pretension to the dignity of form or manner, will at least serve to prevent that disappointment which would be produced by the performance falling below your too favorable and too high expectations. I will, therefore, hastily as my position and time compel, and in such plain manner as our recent personal conference was conducted, repeat in writing, or enlarge upon, and endeavor to more strongly impress some of the subjects of my then verbal remarks—and also, present some other cursory views which seem applicable to your own agricultural position and circumstances.

Among the great and peculiar blessings of South Carolina, are the two important products, or rather the capacity of climate and soil, for producing them, the sweet potato and the many varieties of the Indian or field pea. And although both these crops are cultvated on almost every plantation in the State, and generally to great extent, and though one or both are used largely every where to furnish food to man and beast—still I venture to assert that the value of these products have not been yet fully appreciated by one of their cultivators. As the sweet potato belongs less to your neighborhood than to the lower country, I will pass it by, with no further remark than that I deem it a far more valuable root crop than any other produced in the United States; and that even on plantations where there is the most use made of this root, its value will not be fully availed of, while there shall exist any scarcity of those dairy and live stock products, which are elsewhere obtained from much less nutritious roots, as turneps, beets, carrots, Irish potatoes, &c.

For the pea crop, the climate and soil of this region may perhaps be also somewhat less propitious than those of the lower country. But no where else have I met with better growths of peas than I have seen recently here; and no where such modes of raising the crop, (though but in few cases,) to serve for hay or for manure to the land—and of which peculiar and as yet very limited practices, I wish to induce your adoption and extensive use.

The almost universal mode of raising the pea crop in South Carolina is by planting among corn. The length of the summer permits this planting to be done after the corn is well advanced in growth, and for the peas to have time to perfect their growth after that of the corn has ceased. Universal experience seems to have confirmed the value and profit of the pea crop thus made. But this mode, however advantageous, seems to me of far less benefit, than either of several other modes. Of one of these I have myself had large and satisfactory experience, under a less favorable climate—and others I have but just seen in this neighborhood, or elsewhere in this State.

Whatever may be the amount of product, or of profit, from raising peas among corn, as a secondary cultivated crop, it is attended with much trouble in the planting, and separate tillage.

Peas, (like red clover, which is also a plant of the pea tribe,) draw sustenance very largely from the atmosphere, by their system of broad leaves, compared to what they draw from the soil. Hence such plants take less from the land, and return more to it, than any others, and therefore are the best of manuring or meliorating crops, to be alternated with the more exhausting grain and tillage crops. In this respect, red clover has stood unrivalled, because in the more northern and improved lands, where its admirable manuring and cleansing qualities have been fully experienced, peas cannot be as well raised. From some trials made here, there is good reason to hope that red clover may be raised to great advantage, even without lime, the application of which would ensure its perfect success. But, even if this were not so, the pea crop sown broadcast is scarcely less valuable than clover as a manuring crop, and superior to it in several other respects. And the great ground of recommendation of the pea crop, is that it may be introduced after either of several different grain crops, and to fill longer or shorter intervals of time, which would otherwise be fruitless for melioration, or serve to fill the land with foul weeds and depredating insects. In this manner, peas may be advantageously used to improve and add to any scheme of rotation of crops—lessening the exhausting operation and destructive effects of the worst rotations—or making one really improving and excellent, which, without the addition of peas, would be more exhausting than meliorating.

The principal experience which I have had of peas as a manuring and cleansing crop in my own practice, was the sowing the field broadcast, upon a good and clean plowing, and harrowing in the seed, (of the cow pea, or some other variety producing much vine and leaf,) about 1½ bushels to the acre. The crop at or near maturity of the more forward pods, should be well plowed under about a month before the time to sow wheat. The wheat should be sown on the same furrow, and covered by the harrow. This is an admirable preparation, serving by the thickly covering and shading and smothering and subsequently killing of the peas, well to cleanse and also to manure the land, and to produce a much better crop of wheat than can possibly follow corn, cotton, and still more wheat itself or other broadcast grain. The sole objection to this preparation is the cost of the plowing for the pea seeding; and this perhaps may be often saved by a new practice of which I have recently learned something elsewhere.—The black pea, and also a dark red pea, will lie upon the ground, or remain covered therein, through winter without rotting, and will germinate and grow in the spring. Availing of this property, these peas have been successfully sown both late in autumn, (or early part of winter,) with wheat, and in spring with oats. The peas grow but little until the grain crop is removed, and then grow rapidly, and soon form a good cover. It is not to be supposed that this plan will always succeed. But it has done well, on a small scale of operations, for three years, as conducted by Wm. R. Davis, Esq., in Fairfield, and for six years on a larger scale, by Maj. J. Littlejohn in Union.

If it be not desired to use the broadcast pea crop to prepare for and manure for wheat—or if it be preferred to save the crop for hay—then the latter may be done, as I had the benefit of seeing but a few days ago, on the neighboring plantation of one of your Society, the Hon. J. C. Calhoun. The crop of peas was mowed by the scythe; and after lying a few hours in the sun, and without being turned, the vines were put up in high and narrow cocks around a stake 5 or 6 feet high, to stand until cured enough to be stored in the house. This plan (which, by the way, with smaller cocks, is the best mode I have ever known of curing all kinds of grass for hay,) saves the trouble of turning the hay with forks, and the loss by such turning, causing the dropping of the leaves and shedding the ripe peas, as well as too much sunning the hay.—The provender thus saved is excellent, and the land is left clean for any succeeding crop. In this case, the cow pea was the variety used, and the sowing was in May, at the rate of two and a half bushels to the acre.*

A still more admirable plan of raising peas I saw on part of the same plantation. The seed had been sown broadcast (one bushel to the acre) in the corn land at the last plowing, which was in July. The crop of corn we suppose may be 25 bushels to the acre; and the peas (as seen on the 26th of Sept.) formed a thick and rank cover of the whole ground.

I will now suggest the application of what appear to be the advantages offered by the pea crop, to the increase of the general improvement to be attained from rotation, or alternate cropping.

The great benefits to be attained from a proper system of rotation of crops, including rest to the land, or of manuring crops alternating with the exhausting, would seem scarcely to be known in South Carolina, as nearly all existing practice is in opposition to, or disregard of, the principles of rotation. In the lower and middle districts, where cotton and corn are the great and all important crops, and where there is scarcely any broadcast crops, there is also scarcely anything like rotation practised. In the upper districts *bordering* on the mountains, and where cotton ceases to be a principal crop, and wheat (or oats) becomes so, there is in use an imper-

*It was not until after this communication had been sent to the President of the Society, that I saw another mode of harvesting pea hay, which is still more safe than that described above, though requiring more labor. Stack poles 12 to 15 feet long, and about 4 inches in diameter at the larger end, are set firmly in the ground, where wanted. At about 4 and also 8 feet from the ground, the pole has an auger hole, 2 inches in diameter, bored through, and a strong, round stick, five feet long, passed through each hole. The pea-vines are pulled up, or cut, when there is no moisture remaining on them from rain or dew, and after lying part of a day, or otherwise immediately after being cut, (according to weather and other circumstances,) the vines are stacked around the pole There ought to be some open rubbish on the ground as a foundation; but even this is rarely provided. The stack ought to be 5 feet in diameter, until near the top, when it is brought to a point, and a slight cap of straw put on, if designed to stand long. The sticks serve to admit air, and to prevent too much of the weight of the stack pressing on the lower part. The provender is thus well cured and entirely saved. This method was first introduced in this neighborhood by Mr. Thomas M. Sloan, who has practised it successfully for eight years.

fect kind of rotation, but which is the result not of reasoning and design, but of necessity. For the wheat, or oats, demanding a preparatory cleansing culture, *must*, if raised here at all, follow corn. And as wheat and oats are taken off the land early in summer, the field *must* have rest from a tillage or exhausting crop the remainder of that growing season. And if the wheat and oat ground be not separate from the other land in tillage, the weeds and natural grass, which rapidly cover the land after the grain has been removed, *must* be left ungraved, and thus be permitted to die upon and manure the land slightly, before the next succeeding year's crop of corn shall begin again the short round of exhaustion. Now whether the practice be this very simple and very scourging two shift rotation—or of three shifts, by adding a third year of rest—or of any longer and still better successions of crops—the pea crop may be added thereto, even without any other change, so as to serve admirably well to mitigate the severity o the most exhausting course, or to increase the manuring effects of the most lenient and meliorating. Thus, in the year of rest, if there be one, a good broadcast pea crop may be substituted for the less rich and less dense growth of weeds and scanty grasses. After reaping the wheat or oat crop, peas may be immediately sown, if not obtained by previous sowing with the grain, as above referred to. And with the last plowing of every corn crop, peas may be again sown broadcast, and (if succeeding as well as this year at Fort Hill,) a fine secondary crop obtained for the single cost of the seed and the labor of casting them. Nor would it be necessary that all these intervening pea crops should be applied as manure. Perhaps one of them given wholly to the land in three or four, or even five years, might suffice for fertilization, and the other pea crop be in part or in whole mowed and cured, for hay or winter forage, or otherwise consumed on the land by fattening cattle and hogs.

In addition to the highly valuable manuring and cleansing qualities of the pea crop, it has another important value in any rotation, presented in the complete *change of condition* which it makes in land previously under either cotton, corn, wheat or oats. In such change of condition consists, in my opinion, the greatest benefit of a system of rotation. On this particular head some remarks and new views will be offered, though I shall not discuss generally the ample subject of the theory of rotation, nor present, either as approving or to oppose, any other and more generally received reasons for the practice of rotation.

I deem that a change and succession, or rotation of several different crops, is beneficial mainly in two modes, as follows:

1st. Because one crop, by its necessary and peculiar tillage and management, serves to prepare the land for the reception of another of different kind, and requiring different tillage.—Thus, corn, cotton or tobacco, all requiring after tillage, are not hurt, but on the contrary are improved, by being grown on land foul with the weeds, &c., or a previous growth, and on which and with no better preparation, wheat or oats could not thrive. And these crops, therefore, require to follow either of the former tillage and cleansing crops. By such following of either corn, cotton or tobacco, by wheat, oats or rye, it is obvious that both must fare better than to reverse the order, or to let any one crop be kept for successive years on the same field, or to be attended only with other crops of similar tillage and similar character and habits.

2d. The many disasters which in so many ways sometimes injure all cultivated crops, I suppose to be mainly caused by insects; of which many kinds of the most injurious may be so minute in size as to escape observation. Now every crop and plant has its particular tribes of parasites, or depredating insects or animalcules, which if not confined by their natural wants to that particular growth, or to its near kindred plants, for sustenance and for shelter, cannot thrive on other different plants, and be sheltered in other very different conditions of the land. Thus, if any one crop, and of course one kind of condition of the ground, be continued through many years—whether of wheat or corn or cotton—it may be safely inferred that the tribes of depredators of which the sustenance and shelter are more favored by such crop and its tillage, will continue to increase generally from year to year, and to become more and more destructive in their ravages. Other circumstances, as of weather, &c., when favorable, will still more favor such increase, and if unfavorable, will obstruct and perhaps conceal the injury, still inflicted however, in a less degree. But with such variations, and on a general average of years, crops of the like kind continued year after year, and the land kept in like condition, must serve to render the crops more and more diseased and unproductive, even though no actual decrease of fertility of the soil be suffered. Now, instead of this, suppose every year, or even sometimes oftener, there shall occur as complete a change of crop and of condition of the land, as the interposition of a broadcast and dense cover of peas, between each two tillage or grain crops. It is scarcely possible to conceive a greater change; and it is very improbable that the myriads of insects which had been sustained and kept increasing on any one crop, whether of corn, cotton or wheat, can thrive or even live after such great change of circumstances.

I shall not presume to propose for this region any particular scheme of rotation as the best. To decide such a question is always extremely difficult for the most experienced and enlightened cultivator, for himself and in the place of all his foregone labors and observations. And far less qualified would any person be to prescribe a precise plan of rotation, in a region and for circumstances very different from those to which he had been accustomed. But if the above general views are sound, they may be easily and beneficially applied to practice, and in various modes. I will merely add, that the power, however, of introducing the pea crop in so many ways, and for the several different products of peas, green food, hay, or manure, offers facilities here for rotations more perfect in operation, or more in conformity with reason and theory, than any known to me in practice elsewhere.

In the use of green crops as a manure, it is a common error of new beginners to make the attempt on poor land. The green (or dry) manure crop for the poorest land, should be merely its own natural growth of weeds, permitted to die and fall and decay on the ground, and this to be interposed as often as may be between the tillage and exhausting crops. This manure of weeds, if of less amount and value than an artificial manure crop, as peas, at least costs nothing for seed, preparation or tillage. To obtain profitable returns from peas or clover, the land should be able to bring at least a moderate growth. For very nearly the same cost of seed and plowing would be incurred by having such green crops, or either of two pieces of ground, of which the one would yield four times as much growth, and consequently effect four times as much manuring and improvement as the other.

Though the pea crop is very valuable for dry forage, making indeed an excellent hay, it by no means follows that grasses for hay should be neglected, as they are here, and which neglect is a most deserved opprobrium of the Agriculture of South Carolina in general. I will not enter upon the copious and important subject of grass husbandry and its products, so much needed in this State, and yet so easily at command. One particular crop and practice will only be referred to, because well known to all now present. This is seen in the meadow of C. C. Pinckney, Esq., near the village of Pendleton. The growth is the Rice grass, (*Cersia orizoides,*) which is a native and a very productive and valuable grass for hay, and which, as Mr. Pinckney's meadow shows, may be produced in abundance in every bottom having a stream running through, by means of a very simple and cheap mode of irrigation. This grass thrives best in this southern climate, and may be obtained in every piece of suitable ground by merely causing the stream to flow or trickle slowly over the surface. It is not referred to as the best grass for culture and product, but as one easily obtained, and at small expense. I have known it in my own wet meadow ground for 30 years, and highly appreciate its peculiar productiveness and good qualities for hay. But I had not learned how to give it entire possession of the ground, as is done by Mr. Pinckney, nor is its growth in Virginia by any means equal in size to that which is seen in South Carolina.

The management and maintenance of good meadow land, for hay, are cheaper than those of even the poorest lane under tillage crops; and the net product of hay is not surpassed by any but the richest of tillage crops. Yet no kind of agricultural product, essentially necessary for ordinary consumption, is so much neglected.—Hundreds of thousands of dollars are every year paid for New England hay, imported into Charleston and Savannah, and consumed in localities where the greatest labor of the cultivators are employed to keep down the exuberant growth of grass. And in these same localities, which are peculiarly and admirably suited for profitable dairy and other live stock products, all such products are scarce, mean and at very high prices.

These latter observations apply much more to the sea board than to this region. But there is very little more attention paid here to grass husbandry; and if the scarcity of products be less than in and near the cities on the sea board, it is only because there is less demand for them, and less consumption to produce scarcity.

Most planters do not feel the necessity, nor understand the propriety, of working hay crops, because, as they say, they now make enough long forage for their stock, and if they were to make hay, they would have no market for it.—Hay ought not to be sold at all from ordinary plantations; and in no cases except of excessive and disproportioned production, owing to very extensive and rich meadow grounds, or of great demand and high price for hay, as in the neighborhood of towns, together with the facility of obtaining purchased manures in return. In ordinary cases the planter who makes hay will be himself the most profitable consumer of it, if using it properly. And, perhaps, those who think that they have and consume enough forage for their stock, from their present corn fodder and other offal of grain crops, might find it still better to add thereto the hay from a few acres of meadow. But even if there be no deficiency of food requiring such addition, and there were 50 acres of good meadow added to a plantation of 500 acres of arable land, all this new product of grass might be profitably reaped and consumed on the plantation. And before increasing the stock products by the use of these new resources for feeding and fattening animals, an earlier and most advantageous use may be made of hay by every planter, and to a large amount, by substituting it for the corn fodder which is now universally gathered, and which laborious and injurious process might then be dispensed with altogether. I am sensible that my thus denouncing a practice which is almost universally approved and in use, and in my own country no less than yours, will appear to many as an agricultural heresy, not only unsustained by plausibility, but even absurd and ridiculous. Yet I am well assured, and by experience as well as by theory and reasoning, that the gathering of green corn blades, or cutting off the tops, for fodder, is always injurious to the grain; and that the loss in the value of the grain added to the cost of labor, and risk of securing the crops of fodder, together greatly exceed the whole value of the fodder usually saved. It would perhaps require more time and space than all these remarks should occupy, for me to present to you at full length all the grounds for this opin-

ion; and, therefore, I will add but a few remarks to the assertion of the general proposition.

In your own neighborhood, genetlemen, I have had presented to me a new evidence of the truth of my views in this respect. In observing the novel process of making sugar from corn-stalks, as conducted on a small scale by Major George Seaborn, I noticed the obviously much larger quantity of saccharine juice, and its greater concentration, or degree of sweetness, in the stalks from which the ears had been taken off as soon as they had shot out, compared to those which had been permitted to form grain. This difference, it is manifest, is owing to the greater part of the sugar, in the latter cause, and as nature designs always, having passed into the grain, and where it is converted to starch.—And this alone would show that the saccharine juice of the stalk is needed to form and perfect the grain. But where the ears have remained to grow, and at the latest time of growth of the corn for gathering fodder, (the leaves still being mostly green,) and the grain firm and almost hard, there will be yet remaining in the pith of the stalk a large quantity of saccharine juice. Every particle of the juice is destined to the better filling of the grain, and will be so used if the life of the plant is not cut short. But, when in this state, (nay, often much earlier than at this period of growth,) the leaves are stript, and the top cut, the plant immediately dies, and all subsequent conversion of the sugar then in the stalk to grain is effectually prevented. The grain of such corn is more or less shrivelled, and lighter by several pounds in the bushel than the grain from which the fodder has not been removed. As long as a blade is green, it is acting to sustain the life of the plant and to help to increase the bulk and weight of the grain.

But, putting aside this great and all important objection to the usual mode of saving fodder, there are other conditions which alone ought to serve to induce the substitution of hay, whenever it is practicable. Perhaps not one of you, gentlemen, has ever taken account of all the labor and cost of securing a crop of corn fodder, and comparing it with the value of the crop so secured. Neither have I. But if such estimates were made accurately, and in sufficient number to present a fair average of crops and of seasons, I think it would be found that the general cost would not fall much short of the product, and perhaps might exceed the whole returns. Besides the necessary labor in good corn and in good weather, which far exceeds that of hay-making, there is great risk of a spell of rainy weather occurring during the season (mostly in September) for this harvest; and every rain causes much trouble, and much rain produces great and inevitable loss of the partially cured fodder. Again—this is precisely the season most dangerous to health wherever malaria is at all to be feared, and no kind of plantation labor is so likely to affect health injuriously, as the gathering and securing of fodder. Even in fine, clear weather, the high and rank grass (or peas) among the corn, and the corn blades, are wet with dew, early in the day, and again before night, and the laborers are thus necessarily made wet. And the crispness of the cured (and sun-burnt) fodder, often forbids its being handled in the day time, and requires the night air to prevent great loss in the moving and stacking. This makes much of the work necessary to be performed at night, and which is an injurious or hazardous exposure of the laborers, both because of the night air, and the dew deposited on the high grass.—If any one accustomed to and contented with this slow and tedious and altogether uninteresting portion of plantation labor, could but once compare it experimentally with the rapid, safe, enlivening and delightful operations of hay making, his sensations would as strongly urge the substitution of the former by the latter, as ought to be done by sound calculation of profit and loss EDMUND RUFFIN.

Pendleton, September 28, 1843.

THOMAS AFFLECK'S PROPOSITION.

For a premium of Plate to be awarded to the Planter who raises the most Cotton on a given piece of land.

To the Editors of the Concordia Intelligencer:

GENTLEMEN—I make this proposition with much diffidence, being but a young planter—but, I can safely say, *one anxious to improve and learn.* I have sought every means of acquiring information, and particularly, by conversation with experienced planters. I have visited many plantations noted for being well managed; and the conclusion I have come to, is, that there are few, very few, planters, whose system and practice could not be very materially improved upon.

To convince all of this, let those who think their system already perfect, and that their management of the cotton crop is the best and most profitable, and who have confidence in its results, join me in what I have to propose.

Many, I presume, of those present, have either seen or heard of the communication made to the Albany "Cultivator," in December last, by Dr. Cloud, of Alabama. Dr. Cloud states, that by pursuing a proper system of rotations of crops, by a careful selection of his seed, by manuring high, and by giving additional distance to the plant, he was enabled to gather 5,989 lbs. per acre, of seed cotton. This, all will say, is an enormous yield—and most assuredly it is so. Yet I, for one, have little doubt but it can be reached here—not, however, without making the attempt. Although I fear that I shall never be able to reach so high a mark, I will never rest satisfied until I have come as near it as I can.

If we could, upon our hill lands, produce even 2,000 lbs per acre, by adopting a reasonably improving system, and by almost any extent of manuring, would we not be immensely benefitted? How many planters, cultivating hill lands, gather over 700 lbs per acre? Not many. And yet, to do even this, requires incessant hard work from New Year's-day until Christmas.—The difference between plowing, planting, tending and picking over, say 300 acres, and 100 is very great, and would allow of much labor being bestowed in making and applying manure, and in extra-deep plowing. Nor need I descant upon the comfort, and advantage to the planter, of being able to plant and tend as much ground with one half of his hands, as the whole of them can pick clean by Christmas—leaving him the other half of his force for the rest of the work necessary on a farm—including, of course, under such a system, manure-making.

How it would astonish the farmers in my native country, to be told, that at this late day of agricultural improvement, their brethren in every part of America, and particularly amongst the travelled and enlightened Southern planters, it required a lengthy argument to prove to them the value of deep plowing and abundant manuring!

Soon after reading Dr. Cloud's communication, last Spring, I had a piece of tolerably good hill land, containing three acres, three rods and thirty-five poles, cleared of the previous year's trash—some 200 bushels of manure per acre added, consisting of the scrapings of the cow-pen, partly decayed cotton seed and so on. This I scattered broad-cast, then threw up ridges, which average from centre to centre 5 feet four inches, were then harrowed down by running a heavy harrow lengthwise of the ridge. Here I planted some very superior Gulf-hill seed, presented to me by Mr. Compton, Sen., near Rodney. The seed I first dampened pretty well with brine, and then rolled in dry ashes—dropping some ten or fifteen seeds at about every 26 inches, which were afterwards thinned out to a single plant.

I am not certain of the amount of labor bestowed upon this piece of ground—the tending the same as that given to the rest of the crop; further than that my overseer, Mr. Ventriss, has repeatedly said to me, that he had not one half the trouble with the grass on that piece, that he had with any other part of the plantation—"that the grass did not trouble him there." I rather think that it did trouble some of us this year! This was, of course, to be ascribed to the deep ploughing.

Now, gentlemen, from the (scant) four acres of ground, Mr. Ventriss assures me, that he has already picked 7,325 lbs of superior seed cotton—and that there is yet cotton enough open, and to open, to yield over 2,000 lbs more. I know that he has been very particular both in picking and weighing, and have every reason to believe his report to be correct.

Now here we have, on a first hurried experiment, 9,325 lbs of seed cotton from (scant) four acres of ground—or, allowing 1,330 lbs to make a bale, (and as it is a very fine article, I think it a fair allowance,) we have seven bales of ginned cotton!

I leave it to yourselves to draw your own conclusions, as to the amount of time, labor and manure that one hand could very easily afford to bestow upon such a small tract of land, to produce such a result! It required at least 12 acres of the same land immediately adjoining, treated, planted and tended in the usual way, to yield as much cotton—and the staple is, to my eye, not nearly as good.

What I have to propose, gentlemen, is this: Let all who are willing to put to the test of experiment, a rotation of crops, deep plowing, a sufficiency of manure, choice seed, and additional distance to the plant, give in their names, and pay over five dollars to the Treasurer of this Society, (Adams Co. Agricultural Society,) the whole sum thus paid, to be, by him, and the President, laid out in the purchase of a piece of silver plate, which they shall award to the planter, so subscribing, who shall during the next season, give the necessary proof that he has picked and ginned the greatest quantity of good clean cotton, from five acres of land, planted and tended in such manner as he may have seen fit—tendering along with such proof, a clear statement of the entire process in writing, which each competitor binds himself to do when he enters for the sweepstakes. The proof requisite may be determined upon by a majority of those agreeing to compete. Those wishing to become competitors may either address W. J. Minor, Esq., President of the Adams Co. Agricultural Society; Wm. J. Ferguson, Esq., Treasurer, or myself, either through the columns of the South Western Farmer, at Raymond, or by mail post-paid. I have already fair assurance that the purse will amount to between fifty and a hundred dollars, and can see no reason why we may not have fifty entries.

November 18, 1843.

RECEIPT FOR CURING HAMS.—We have been handed the following receipt for curing hams by one of the most eminent practitioners in this city; the saleratus is at least new to us, and we therefore publish it, although it may not be a new ingredient in the receipt to others. In Cincinnati, where large quantities of hams are annually cured, pepper, allspice, cloves, nutmeg, cinnamon, and other little ingredients are usually added; but to the receipt.

Cover the bottom of the cask with coarse salt, lay on the hams with the smooth or skin side down, sprinkle over fine salt, then another layer of hams, and so continue until the cask is full. This ought to be of the larger kind. A cask holding 64 gallons is small enough, and it would be better if it held 120 gallons. Make a brine in the following proportions: 6 gallons water, 9 lbs. salt, 4 lbs. brown sugar, 3 oz. saltpetre, 1 oz. saleratus. Scald and scum, and when cold pour the brine into the cask until the hams are completely covered. The hams should remain in this pickle at least three months, and a little longer time would do them no harm.—*American Farmer.*

RECIPE FOR MAKING CISTERN CEMENT.—Ashes two parts, three parts clay, one part sand, mixed with oil, will make a cement as hard as marble, and impenetrable by water forever.

From the American Farmer.

VERY IMPORTANT TO FARMERS.

A new edition improved and greatly enlarged, of the Bommer Manure Method, secured by United States letters patent.

AGRICULTURISTS, although you have favorably received the first edition of my method, and though, as it appears from numerous testimonials in the agricultural papers, it has given satisfactory results, I have nevertheless seen that the first edition was too incomplete, and that from the numerous questions which have been addressed to me by subscribers, I have, like them, felt the want of a commentary upon the instructions, and clear and precise explanations upon various points of the application of the system, so that it may be better comprehended and more easily put into practice.

I have written a new work which is more complete, and which, I hope, will meet with their approbation.

It does not become me to judge of the merits of this new edition; nevertheless, I think that I can give the assurance that, in this work, the system is so improved, and its application rendered so easy, that the least intelligent farmer, if faithfully conforming to the prescriptions and instructions therein contained, cannot fail of success in his operations.

This work resting upon facts and practical results, which are conscientiously reported, is presented to you with confidence. Try and judge.

The work is divided into two parts. The first contains the method in all its simplicity.

The second contains explanations and analytical developments of the system; instructions upon its application; some new processes; solution of manure questions of high importance; and lastly, supplementary articles consequent upon the system.

To give you an idea of the new edition, I will cite part of its contents. The first part of the method contains—

1st. Two different processes, by means of which any one can cause, in a few days, the decomposition of all straw and green or dry vegetables, and their conversion into a rich, unctuous and durable manure.

2nd. Two processes, one by high fermentation, and the other by moderated fermentation, by means of which any one can reduce all kinds of turfy or swampy matter into a rich vegetable compost or mold.

3rd. A process, without fermentation, to reduce all kinds of swampy matter, pond mud, slime from rivers or the sea shore, street mud, black earth from the woods, &c., into a superior mineral compost.

4th. Two processes for preparing compost with earth.

5th. The means to augment and ameliorate manure heaps.

6th. The means to prepare "purin," a fertilizing liquid for irrigation.

7th. The employment of dregs or lees, residues of manufactories.

8th. A process for reviving the heat under garden beds, without changing the litter.

These various operations are represented by nine designs, each occupying its respective place in the work.

SECOND PART—FIRST SECTION.

1st. Vegetables compared with animal manure.

2d. Four principal advantages of the Bommer manure over that of cattle.

3d. A dissertation upon fermentation, the gravest question upon the subject of manure.

4th. Opinion of authors upon the question, "Should manures be fermented or not?"

5th. My opinion upon the question.

6th. Appropriation of my manure to different earths.

7th. Appropriation of my manure to various plants.

8th. Solution of the problem put by Payen, the celebrated chemist. He says "that the art of manures consists in the avoidance of the too great solubility of materials which decompose too easily, and to render soluble those which decompose with too much difficulty."

9th. The nourishment of plants, and of what they are composed.

10th. Vegetable metempsychosis, or transmutation of a dead into a living vegetable.

11th. Economy—how to cause it.

SECOND SECTION.

1st. Four different qualities of saturated water.

2d. The disposal of the place of operations in different ways.

3d. Ley ingredients; means of procuring them without expense; their fertilizing value.

4th; Retrenchment of three ingredients which are not absolutely necessary in the ley.

5th. Employment of ground bones, horn shavings, saw dust, ground charcoal, blood and other residues of butcheries and salting establishments.

6th. Table for reduction or augmentation of the ley ingredients, so as to appropriate the manure to the soil and plants.

7th. Variations of the quantity of the ley ingredients, according to the size of the heap.

8th. The least and greatest quantity of materials which can be employed in the fabrication of Bommer manure.

9th. Virtue of the ley—what it is.

10th. A simple process to render manure as short as you wish.

11th. How to reduce leaves to manure.

12th. Reasons why the heap ought to be covered with straw or hay, and not with solid or compost materials.

SECTION THIRD.

1st. Proportion to observe in the mixtures of turfy or swampy materials with vegetables, and why.

2d. The most favorable season for the preparation of composts after this method.

3d. Is it advantageous to use composts in a fresh state?

4th. Regulations to observe in the manufacture of composts.

5th. European composts compared, or mould compared with mine.

6th. Poudrette compared with my composts.

7th. Means considerably to augment the manures of a farm.

8th. Immense advantages of the employment of human excrements and animal dejections.

9th. Effect of watering with "purin" or manure liquor, urionus, putrified water, compared to that of my mineral or earth composts.

10th. Liquid manures compared with my composts.

11th. Enumeration of 24 principal advantages of this method.

SECTION FOUR—SUPPLEMENTARY ARTICLES.

1st. Analyses of earths; simple measures to detect the nature of earths without the aid of chemistry.

2 l. Advantage resulting from this analysis.

3d. Interest which every one has in knowing the nature of his lands.

4th. Means to detect marl.

5th. Division of manures; mode in use compared with that which I propose.

7th. This method is already in use on a great many farms; results which have been obtained from it.

The matter of the new edition occupies about 100 pages; it will be henceforth furnished to subscribers instead of the abridged method, which contained but 20 pages. The price of the patent right is definitely fixed as follows:

Farm with garden, not over	20	acres,		$ 6
"	"	"	100	" 10
"	"	"	200	" 16
"	"	"	300	" 18
"	"	"	400	" 20
Over 400 acres in any one farm,				25

The method cannot be taken for only a portion of a farm, and every subscriber is required to declare the whole extent of his arable land.

By the necessary documents recorded in the Patent Office, the right for the Southern and Western States is held by *Abbett & Co.*, of Baltimore, and for the Northern and Eastern States, viz: New England, New York, New Jersey, Pennsylvania and Delaware, by *Geo. Bommer*, of New York, who keeps his office at 75 Greenwich street. Farmers living in the Northern States who desire to buy the true method are invited to send to my office or my agent. The only agents established by me, and who are authorized to sell my patented method, are Messrs. *Eli Barnet*, at Westville, Connecticut, general agent for the New England States, and *H. D. Robinson* at New Brunswick, New Jersey, principal agent for the State of New Jersey.

All agents hereafter appointed will be announced in the newspapers of the respective counties and States. Principal agents who may appoint sub-agents are bound to give notice to the agricultural public through the press.—Whenever this announcement is not made, the farmer should be on his guard not to be duped by counterfeiters, (who have already arrived,) and who will not fail to offer them false methods for their good money.

To facilitate the circulation of my method, a register is opened with each postmaster, where farmers, who have the intention to buy it, can subscribe. These postmasters will address every month a list of subscribers to my office, or to my principal agents in the respective States. The postmasters will receive, in the course of the next month, instructions for their guidance under the circumstances.

Every subscriber who, having paid the price, should not receive the method in due time, will please notify me of the delay, (at 75 Greenwich street, N. Y.,) when it will be immediately attended to.

Farmers, take notice that *Mr. Heermance, of Kinderhook, is not my agent.*

In order to prevent the frauds and to counteract the manœuvres of some rapacious individuals, always ready to invade the rights of others, I will serve them up to the agricultural public as they present themselves; and in this, I count upon the support of the press, who are also interested in denouncing to the public those who meditate injustice to them.

Finally, it should be known that all copies of the method for the northern and eastern States are signed and sealed by myself, and those of the southern and western States by Abbett & Co.; that any method embodying our instructions, which should be circulated under any other name, will be considered as false and counterfeit, and that those who make use of it will be prosecuted according to law.

Those who desire to buy the right for a State, or for one or two counties within my limits, can address me at my office, or my principal agents in the different States.

All editors of newspapers who have more than 400 farmer subscribers, by inserting the present article entire, and accompanying it by a small editorial article, shall have a right with a copy of the method, to its fullest extent, with the privilege of ceding the right to any of his friends, if he should not himself be a farmer.—To be entitled to the above privilege, he will address to my office the journal which contains the insertion in question, and the method will be immediately forwarded. If the editor intend to cede his method to another person, he should inform me, post paid, and send me the name and residence of the person to whom he wishes to cede it.

GEO. BOMMER.

The starch factory in Mercer manufactured about 140,000 pounds of an excellent quality last winter, grinding about 16,000 bushels of potatoes. We learn that they have made arrangements to grind 24,000 bushels of potatoes the coming winter, which will produce more than 240,000 pounds of starch. They sell the commodity in Boston for about $4 per hundred. This starch is used by the New England manufacturers for bleaching, in preference to that imported from Poland.—*Stockbridge Visitor.*

From the Southern Shield.

BARBOUR COUNTY AGRICULTURAL SOCIETY.

A meeting of the Agricultural Society of Barbour county, was held on Wednesday, the 22d of November, in the Baptist church; the President, Col. McDonald, in the chair. An eloquent and interesting address, abounding in valuable agricultural information, was delivered by Col. John L. Hunter. At the request of the President, the chair was then taken by Gen. Shorter, and Col. McDonald read the following

REPORT:

To the Members of the Barbour County Agricultural Society:

Gentlemen:—On the first of April last, I received through the Post Office, from the Hon. D. H. Lewis, Member of Congress from this district, the following seeds, directed to the President of the Barbour county Agricultural Society:

The English Dwarf Pea, Tobacco Seed, from Trinidad, the Alverado Wheat, the Blue Stem Wheat, and the Potatoe Oat. Owing to the small quantity of each kind of seed, and there being no meeting of the Society until June, I determined that the object of the donor would be more certainly carried out by sowing the seed and turning over the amount gathered to the Society, than by keeping them until a meeting took place and dividing them. Consequently on the first day of April I carefully sowed them in my garden in drills. I had some fears at the time, that the wheat might be injured by the frost, owing to its being sowed so late in the season, but as I might succeed in raising a small quantity of seed for each member, I thought it best to risk the sowing.

The following is the result: The peas came up, but owing to their having been sowed late and a spell of dry weather about that time, they failed; the tobacco sowed never came up; the Alverado and the Blue Stem Wheat, and the oats, all came up quickly and grew off finely, and for a time promised to do well; both kinds of Wheat were attacked with rust so severely, that I was enabled to save but a very small quantity of seed.

I succeeded much better with the oats; they came to maturity. I was enabled to save a sufficiency of seed to furnish each member of the Society with seed from the Potatoe Oats sowed, sufficient to secure seed. I consider the Potatoe Oat a valuable grain; they are said to weigh forty-five pounds to the bushel, and from the rapid growth and fine straw, I am of opinion they will do well in our climate and soil. The Oats and Wheat saved for the use of the Society I now present. ALEXANDER McDONALD.

The Report was on motion unanimously received and adopted.

On motion of Col. McDonald, the following resolution was unanimously adopted:

Resolved, That the thanks of the Barbour county Agricultural Society are due to the Hon. Dixon H. Lewis, for his kindness and attention to the Society in furnishing it with different kinds of rare and valuable seeds.

Col. McDonald then offered the following resolution, which was unanimously adopted:

Resolved, That the Barbour County Agricultural Society has sustained by the death of Maj. W. H. Snipes, 1st Vice President, the loss of one of its most active, useful and valuable members; and this community a citizen who enjoyed its confidence, and who was universally esteemed by all who enjoyed the pleasure of his acquaintance.

On motion of Col. Hunter, the resolution was directed to be communicated to the family of the deceased.

The President having resumed the chair, suggested to the Society the propriety of electing delegates to the State Agricultural Society at Tuscaloosa.

On motion of Col. Hunter, Gen. Shorter, Mr. W. B. Moore, and Dr. DuBose, were appointed a committee to nominate delegates.

The committee reported the names of Judge S. Williams, Col. A. McDonald, Col. John L. Hunter, Col. John Gill Shorter, and John A. Calhoun, Esq.

On motion of Dr. DuBose, a committee was appointed by the chair, to distribute the seeds alluded to in the report. The chair nominated Dr. DuBose, Gen. Shorter and Mr. Flournoy.

On motion of Dr. DuBose, it was voted that each member wishing seed leave his name with the Secretary.

On motion of Gen. Shorter, a committee of five be appointed by the chair to make arrangements for the celebration of the Anniversary of the Society on the 22d February next. The chair appointed Gen. Shorter, Messrs. Treadwell, W. Beauchamp, John M. Moore, and T. Flournoy.

The Society then adjourned to the next regular meeting. A. McDONALD, President.

E. C. BULLOCH, Sec'y. pro. tem.

At the Agricultural Fair held on the afternoon of 22d Nov., the following premiums and honors were awarded:

Best brood mare, Robert Ricks, $3.
Second best do., Mr. Posten, honors.
Best bull, Robert G. Ricks, $3.
Second do., Gen. Shorter, honors.
Best milch cow, Robert G. Ricks, $3.
Second do., Gen. Shorter, honors.
Best boar, Thomas Flournoy, $2.
Second do., Col. J. G. Shorter, honors.
Best Sow, Thomas Flournoy, $2.
Second do., Thomas Flournoy, honors.
Heaviest pig, six to twelve months old, W. Moore, $3.
Best counterpane, Mrs. W. Bates, $2.
Second best do., Mrs. W. Bates, honors.
Best article of negro clothing, Mrs. J. A. Calhoun, $4.
Best 3 year old colt, Robert G. Ricks, $2.
Best mule colt, John W. Johnson, $2.
One wolf-skin, Mr. Hendricks, $2.

RULES FOR WIVES.

1. Always receive your husband with smiles—leaving nothing undone to render home agreeable—and gratefully reciprocate his kindness and attention.

2. Study to gratify his inclinations in regard to his food and cookery; in the management of the family; in your dress, manners and deportment.

3. Never attempt to rule, or appear to rule, your husband. Such conduct degrades husbands—and wives always partake largely in the degradation of their husbands.

4. In every thing reasonable comply with his wishes with cheerfulness—and even as far as possible anticipate them.

5. Avoid all altercations or arguments leading to ill humors, and more especially before company. Few things are more disgusting than the altercations of the married when in the company of friends or strangers

6. Never attempt to interfere in his business unless he asks your advice or counsel; and never attempt to control him in the management of it.

7. Never confide to gossips any of the failings of your husband, nor any of those little differences that occasionally arise in the married state. If you do, you may rest assured that however strong the injunctions of secrecy on one hand, or the pledge on the other, they will in a day or two become the common talk of the neighborhood.

8. Try to cultivate your mind, so that, should your husband be intelligent and well informed, you may join in rational conversation with him and his friends.

9. Think nothing a trifle that may produce a momentary breach of harmony, or the slightest uneasy sensation.

"Think nought a trifle, thought it small appear;
Small sands the mountain, moments make the year,
And trifles, life. Your care to trifles give
Else you may die ere you have learned to live."

10. If your husband be in business, always in your expenditures bear in mind the trying vicissitudes to which trade and commerce are subject; and not expose yourself to the reproach, should he experience one of them, of having unnecessarily expended money of which you and your offspring may afterwards be in want.

11. While you carefully shun, in providing for your family, the Scylla of meanness and parsimony, avoid equally the Charybdis of extravagance—an error too common here, as remarked by most of the travellers who visit this country.

12. If you be disposed to economize, I beseech you not to extend your economy to the wages you pay to seamstresses or washerwomen who (particularly the latter) are too frequently ground to the earth, by the inadequacy of the wages they receive. Economize, if you will, in shawls, bonnets and handkerchiefs—but never by exacting labor from the poor without adequate compensation, incur the dire anathemas pronounced in the scriptures against the oppressors of the poor.—*Valley Farmer.*

INOCULATING CHEESE.—What will the ingenuity of man not contrive? A method has been discovered of inoculating cheese; or in other words, of transposing the character of an old cheese into a new one. This rather curious idea is brought forward in a communication to the Agricultural Journal, by John Robison, Esq., Secretary of the Royal Society of Edinburgh. "If it be required," says he, "to communicate to a cheese the flavor and appearance of an old one, it may be done by the insertion in the new cheese of proportions of the old one containing the blue mould. The little scoop which is used in samples of cheese, is a ready means of performing the operation by changing ten or a dozen rolls which it extracts, and placing them to disseminate the germ of the blue mould all over the cheese.

'A new Stilton cheese treated in this way and well covered up from the air a few weeks, becomes thoroughly impregnated with the mould, and generally with a flavor not to be distinguished from the old one. I have sometimes treated half a Lancaster cheese in this way, have left the other half in its natural state, and have been much amused with the remarks of our friends on the striking superiority of the English cheese over the Scotch one.'

If this ingenious plan be found really successful on repeated trials by others, Mr. Robison will deserve our thanks for bringing it forward. The next invention we shall hear of will probably be that of inoculating legs of mutton, and turning them into beef.—*Maine Farmer.*

SQUASHES.—It has been asserted, as the result of an accidental experiment, that squashes sown in the fall will survive the frosts of winter and spring, and will ripen much earlier than any which can be raised by sowing in the spring. Those sown in the spring and those sown in the fall, were, in the case alluded to, exposed to a severe frost; the former were killed, while the latter survived. It may be worth a more satisfactory experiment. The earliest sallads we know, are grown in this way. The same has been said of a species of beans, and even of potatoes.

To preserve good squashes in perfection, great care is necessary to keep them from the neighborhood of others of an inferior kind, and especially of pumpkins. If grown together, the good uniformly deteriorate, and the best squashes become bastard pumpkins. However mysterious this fact may appear, it is unquestionable; and it is probably to be explained on the same principles with a fact no less unquestionable, that the different species of corn and of grain always mix when they grow in the neighborhood of each other.—*Selected.*

An exchange paper states that the father of an interesting family, near Detroit, Mich., not long since stopped the only newspaper that he allowed himself or family, and solely on the ground that he could not afford the expense.—This man chews $14 60 worth of tobacco a year!

From the American Agriculturist.

TANNING ON THE PLANTATIONS.

INGLESIDE, Miss., Sept. 19th, 1843.

Tanning leather for the use of the plantation, is an item of good management that should not be overlooked by any planter. Nor would it be as much overlooked as it is, if the simplicity of the process was generally known—that process, I mean, that will suffice for making leather for home use. The *tanner* by profession, in order to prepare an article that will command a good price in market, and have a merchantable appearance, puts the hides and skins through a greater number of manipulations; and, that he may work to better advantage, has his arrangements on a more extensive scale.

The vats, tools, and implements, really needed, are few and simple. Four *va's* will generally be found all-sufficient; one for a *pool* of fresh water, and for *baiting;* one for *liming;* another for *coloring;* and a fourth for *tanning*. The best size, in the clear, is seven feet long, four and a half feet wide, and five feet deep. They should be placed so as to be easily and conveniently filled with water from a spring, running stream, or cistern. Dig the holes 9 feet, by 6½ and 6; if the foundation is clay, the depth need not be over 5 feet. Form a stiff bed of *clay mortar* in the bottom, on which to lay the floor, and on it erect the sides and ends of the vat, of plank of almost any kind, sufficiently thick to resist the pressure from without—two inches will be thick enough. When this is done, and the whole nailed fast, fill in the vacant space all round with *well-tempered* clay-mortar, ramming it effectually: it is on this, and not the planks, that dependence is placed for rendering the vat perfect. When well made, a vat will be good for a long lifetime—the *ooze* preventing the decay of any but the top round of plank. Such a vat will hold 15 large beef hides, (30 sides,) besides a number of small skins.

The material used for tanning, is the bark of the red or black oak, stripped when the sap flows in the spring, stacked and dried—of which about four pounds are supposed to be necessary to produce one pound of leather. There is an article occasionally used, called "catechu," which is an extract made from the wood of a mimosa tree, a native of India, half a pound of which answers the same purpose. Galls, willow bark, the bark of the Spanish chesnut, and common elm, as also sumach, are all used by the tanner. It has been recently found that the root of the palmetto answers an equally good purpose with the best oak bark.

Bark has to be ground as wanted; or if the quantity needed is small, and it is not thought advisable to incur the expense of a bark-mill (from $10 to $18,) it may be pounded in a large mortar, or beat up on a block. It will require one-third more of pounded than of ground bark, to afford equally strong ooze, which is the infusion of bark.

The principal tools requisite are a flushing-knife, currier's knife, a brush like a stiff horse-brush, and a fleshing-beam. The fleshing-beam is made by splitting in two a hard-wood stick of about a foot in diameter; inserting two stout legs, some thirty inches long, in one end on the split side, so that the other end rests on the ground, with the round side up; the elevated end being high enough to reach the workman's waist. A fleshing-knife may be made by bending an old draw-knife to suit the *round* of the fleshing-beam.

The skins of bulls, oxen, cows and horses are called *hides*; those of calves, deer, sheep, &c., are known as *skins*.

Fresh and dried hides receive the same treatment, except in the washing process. Those that are salted and dry, (and no hide should be dried with less than from two to four quarts of salt being rubbed on the flesh side—dried without salt, it is extremely difficult to soften them,) require to be steeped, beaten and rubbed several times alternately, to bring them to a condition sufficiently soft for tanning.

Green or fresh hides must be soaked in pure water from 12 to 24 hours, to extract all the blood, &c., and soften the extraneous fleshy matter, which must then be removed—throwing one hide at a time on the fleshing-beam, grain or hair-side down, and scraping or shaving it off with the fleshing-knife, which must be somewhat dull or the skin is apt to be cut. They are then put in the liming vat, which is supplied with strong lime-water, by filling the vat a little over half full of water, and adding thereto four bushels of unslacked (or of air slacked) lime, or at the rate of two-thirds of a bushel of lime to the barrel of water. This will suffice for fifteen hides; each time that they are removed and a fresh lot of hides put in, add another bushel of lime, which will keep up the strength for a twelve-month. Before using, stir the lime well up, and while it is thus mixed with the water, put in the hides evenly, so that the lime will settle on every part of them. They are to remain here from ten to fifteen days, or for three or four days after the hair will rub off with the finger completely and with ease. While in the liming-vat, they must be moved up and down every other morning, to expose them to the air, and to the equal action of the lime. Being now ready for unhairing, cut each hide in two, by slitting them along the centre of the back with a knife, forming them into *sides*. Throw ten or twelve of these sides on the fleshing-beam, and strip the hair off with the knife; and as they are unhaired, throw each one into the vat of fresh water to bait or soak. When the lot of sides and skins in hand have been all unhaired and thoroughly washed, throw them again, and at once, on the fleshing-beam, with the grain or hair side up, and work them over (rub and press them) with the knife until all the gummy or mucilaginous matter is worked out. This should be repeated two or three times during ten or twelve days, being each time baited anew in fresh water. And this working over must only be done when the sides feel soft and smooth to the touch; as they will at times, from some unexplained cause, feel rough, at which time they must not be worked over. While they are thus baiting, they must not be neglected, or they will soon spoil. Tanners are in the practice of adding 1000th part of sulphuric acid (oil of vitriol) to the last bait, which has the effect of swelling the pores and distending the fibres, and thus rendering the skins more susceptible to the action of the ooze: forty-eight hours generally suffice for this last baiting.

In the meantime, some good strong ooze should be prepared for the first tanning process, called *coloring*. Fill a vat a little more than half full of water, and add bark, in the proportion of 1½ bushels of ground, or 2 bushels of pounded bark, to the barrel of water, which will bring the vat up to about two-thirds full. When the bark has soaked from four to five days, the sides are put in, and allowed to remain 15 days; during which they must be *once* well and carefully fleshed and worked over, and must be drawn up and down every morning, for the first week at least, and the bark well plunged or stirred up, to have them color evenly.

After this, the vat being now two-thirds full of this same ooze, after drawing out the hides, lay a good coating of fresh bark, of say an inch thick, on top of the water, on which it will float, lay on this a side, spread out evenly; and if it has to be lapped over in any part, lay on more bark until it is all well coated, taking care to place those hides at the bottom of the vat now, that were at the top last time. On this side lay an inch-coating of bark, and on that another side, and so on, with alternate layer of bark, until the vat is full, or the sides all laid away.

In this, which is call the first bark, the sides must lie four weeks. They are then drawn out, and the spent bark taken out with a skimmer or drainer. The sides are then replaced as before, with alternate layers of fresh bark, in the same ooze, which has acquired some additional strength, notwithstanding the amount of tannin and extractive matter, contained in the bark, that has become intimately combined with the animal fibre of the hide. In this second bark they remain six weeks undisturbed, when they receive a third bark, in the same way, in which they are left another six or eight weeks. Three barks will suffice to tan deer, hog, calf, and other small skins; four barks will make good sole leather, but five are preferable.

The tanning process being completed, sole leather is taken out of the vat, rinsed effectually, and dried in the shade, hanging the sides up by two of their corners to joists, where they may remain until wanted. Those sides intended for upper and harness leather, (which are those of cows, &c.—the largest and thickest bullock hides being used for sole leather,) as also deer, hog, and other small skins, being thoroughly rinsed, are spread out on a strong table, with the grain or hair side up, and scoured with a stiff brush, like a very stiff horse-brush, occasionally throwing on pure water, until all the ooze is scoured out. Tanners use the edge of a stone, made smooth, to assist in rubbing out the ooze, and all the water that can possibly be rubbed out. They also use what they call *a slicker*, being a dull edge of copper of about six or seven inches long, set in a piece of wood, to serve as a handle.

After they are all served thus, and rubbed as dry as possible, the table is cleaned off, and the skins thrown back upon it, grain side up, and are rubbed with tanner's oil (cod-fish oil) as long as the leather will receive it. Harness leather must be completely saturated. As they are oiled, fold them up and lay them aside.—When they are all gone over, lay one on the table at a time, flesh side up, and with a rag rub on all the dubbing that the leather will absorb. Thin hides require but a small quantity; harness leather must have a heavy coating.

Dubbing, which consists of equal parts of tar and tallow, melted together, and well mixed, must be made the day previous to being used. Lard may be used in place of tallow, but will require a lesser proportion of it. Each side of leather is then hung up by two corners to joists, there to remain until perfectly dry, or until wanted.

If iron or steel touches a hide during the process of tanning, when in the least wet, or even moist, it will discolor it, forming an indelible black mark.

To blacken harness or other leather, take the skin when completely dried, and if any greasy spots appear, showing that more oil or dubbing has been applied than the leather could absorb, wet the spots with a little strong ooze, and scrub them out with the brush. Then apply a good coat of copperas (sulphate of iron) dissolved in ooze, until the leather has a good color all over. After this, when dry, put on another good coat of oil. The leather may then be smoothed off with a rounding edge of polished steel, or glass, or stone.

T. AFFLECK.

From the Southern Planter.

HORSES,

Mr. Editor—The ordinary means of purging a sick horse are so slow in operating, that, in many cases, they do no good. I send you a very simple *recipe* with which some of your readers may not be acquainted, which I have never known to fail, and regard as the best and simplest. I saw it many years ago in the American Farmer, and have tested it.

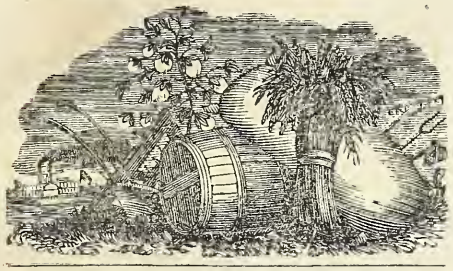
"Take a piece of chalk about the size of a walnut, pound it in a mortar, or wrap a rag around it and reduce it to powder with a hammer or any thing else—put the powder into a quart bottle—pour common vinegar into the bottle until the effervessence prevents your pouring more, and (having the horse ready) drench him with it. But little vinegar can be gotten into the bottle the first time, so that you will have to pour more into it, and drench a second time. Ordinarily a pint will do. In cases where it does not operate in *five* or *ten* minutes, persevere in the dose, and in a very short time the suffering animal will be well again."

I concur in the opinion that every farmer who

wishes to benefit others should not be ashamed to back his recommendation by his *name*. If *he* be ashamed of it, who ought to confide in it?

Very respectfully yours,
C. W. Gooch.

Airfield, June 20, 1843.



WEDNESDAY, DECEMBER 6, 1843.

Back Numbers.—All new subscribers to the "Southern Cultivator" can be supplied with the back numbers.

TO OUR FRIENDS.

In the appeal which we made to you in our last, for the extension of the circulation of the "*Southern Cultivator*," we omitted to state the necessity of having the result of your labors by the first of January, in order to afford us some idea of the number of papers necessary to be issued. As this is very important, we hope you will bear it in mind and send us your lists of subscribers by that time. We hope that every friend of the work will unite in a zealous effort to extend our circulation.

AGRICULTURAL FAIR.

We are indebted to some friend, who will please accept our thanks, for a copy of the "*Southern Shield*," containing a report of the Fair of the Agricultural Society of Barbour county, Ala., which will be found in another part of this number.

The existence of an Agricultural Society in the newly settled county of Barbour, and the deep interest manifested in the cause of agriculture by the members, afford food for reflection, while they serve as an example worthy of imitation for our planters in the older settled States of South Carolina and Georgia. We therefore commend the subject to the calm and dispassionate reflection of our readers. Certainly if the wise forecast of the planters of Barbour should suggest the necessity of forming an Agricultural Society for the preservation and improvement of their rich, fresh lands, and the introduction of the most approved and enlightened system of culture, how much more imperious the necessity for the organization of such Societies throughout every old settled county in Georgia, where a system of culture, the most ruinous to the soil ever practised by any people, has exhausted her lands, and driven many of her most valuable citizens to seek a home in the Southwest? We have so often alluded to this subject, and so frequently urged upon our readers the necessity, the great importance, and the lasting benefits of Agricultural Societies, that we feel that we almost subject ourself to the suspicion of being a monomaniac upon this question; for we have not only urged it again and again in our editorial remarks, but we have availed ourself of the lights afforded by the experience of others, and have given our readers their views also. It has often occurred to us as strange, passing strange, that intelligent men, and even planters themselves, in the prosecution of every other branch of business, unite their councils to direct their energies the more wisely; and for the attainment of their objects with the greatest possible certainty and precision, they avail themselves of all the lights which the experience, investigation and practical operations of others can afford; yet in Georgia, save in a few, very few, counties, men will not, or have not, associated themselves together for the purpose of imparting information in that important branch of business upon which is based the prosperity of a nation of people in every department of science or mechanics. Can any of our readers account for this extraordinary state of things—this paradox in our characters—this evident disregard of our immediate private interests, and this virtual declaration to the world, that we are either already sufficiently learned in the science of agriculture, or too indifferent and indolent to make an effort for the improvement of our own, or the system of others? Can it be that we are like the boy, who persisted in carrying a stone in one end of his bag and a pumpkin in the other, simply because it was the established custom of his father?—Certainly every intelligent planter must have long since perceived, if he ever for one moment attempted to unveil the future, that the system of our fathers would assuredly, at no very distant day, result in the total destruction of our soil, and the consequent depopulation of our State. Can we not then persuade or invoke them to stay their march, to turn aside from a course which will entail poverty and distress upon themselves and their posterity, and adopt a more wise policy, a more enlightened system, which will secure peace and plenty, and contribute, in an eminent degree, to the cultivation of the intellect, the refinement of our feelings, and the promotion of domestic happiness? With these remarks, (already extended much beyond what we had designed,) we for the present leave the subject to the consideration and reflection of those for whose immediate benefit we have urged its importance.

BOMMER'S MANURE.

Desirous to afford our readers every facility for obtaining information in relation to this important subject, which is daily attracting more and more attention throughout the Union, we have transferred to our columns, in this number, the Card of Mr. Bommer, to which the attention of the reader is invited. The agent of Mr. Bommer is now engaged on the plantation of one of our planters, near the city, in making a heap of manure on the Bommer system, and we hope to be able, in a short time, to favor our readers with the result of his labors, together with such other information as we may deem of value for the consideration of planters.

Large Cotton Stalk.—R. P. Miller, Esq., of the parish of Concordia, has sent the editors of the Intelligencer a cotton stalk thirteen feet long, which they say has the appearance of a vigorous young sapling.

SWINE MANAGEMENT.

In managing hogs, it is important that pigs should be farrowed at seasons of the year neither exceedingly hot or cold. April and September are the best months for the sows to pig. For this purpose they should go to the males the last of May or first of June, and in December. It is a good rule never to let breeding sows get very poor or very fat. From the time they go to the boars till within a month of pigging they should be fed regularly, but only in sufficient quantities to improve them slowly. As the time of pigging approaches they should be fed more bountifully. But if they become too fat, they often overlay their pigs, and are not usually careful with them. Many rules have been given for the management of sows at farrowing, but only a few plain directions will be of service:—1st. Let no other hogs interfere with the sow; and 2d. Be certain she has water and a pleasant shelter in the lot. If she should happen to make choice of an unsheltered spot for her bed, a few planks, or a board shelter will protect her from the sun and rain.

Young pigs should become fat as soon as possible, and be kept so till they are ready to butcher. To effect this matter, the dams should have an abundance of rich food, such as kitchen slops, roots, boiled corn, &c.

It is a good practice to have a small pen with a hole, to admit the pigs, and a low trough for them to be fed in from the time they are two weeks old.

When the pigs are from six to eight weeks old, if they have learned to eat well, they should be weaned. At this season there is greater difficulty than any other. Unless they have close attention they will become poor, sink behind the shoulders, and scarcely ever recover from it.—Let them have food regularly five times per day, and it should be such as will suit the stomach, and be most nutritious. Slops will answer a good purpose for part of the time, but the food should vary every day. Milk, boiled meal, slops, roots, and dry food, as corn, should be given daily. Hogs should have water at all times, and if salted every day, they will do the better for it. Grass and clover are always acceptable to swine, and cymlings, pumpkins, and peas are very good, and artichokes, in winter, (except when the ground is frozen) are unequalled, particularly if the hogs have salt and a little dry food daily.

Care must be taken that hogs do not occupy the same bed too long, and by all means they should be kept from sleeping in stables, about manure heaps, in shucks, or wet or old straw.

The cheapest pork is that which is made of pigs dropped in the spring and slaughtered the December following. By this process a winter's feed is saved, and by "pashing" the pigs will weigh from one to two hundred pounds at eight or nine months old. For large pork, the year olds will do tolerably well, but we think it bad economy to have killing hogs more than twenty months old.—*Tenn. Agriculturist.*

A Curious Agricultural Experiment.—The following novel and interesting experiment has lately been made by Mr. A. Palmer, of Cheam, Surrey: In July, 1842, he put one grain of wheat into a common garden pot. In August the same was divided into 4 plants, which in three weeks were again divided into 12 plants. In September these 12 plants were divided into 32, which in November were divided into 50, and then placed in open ground. In July, 1843, 13 of the plants failed, but the remaining 38 were healthy. On the 19th August they were cut down, and 1,972 stems, with an average of 50 grains to a stem, giving an increase of 98,600.

One of the stems has been sent to us as a sample, which is rather more than six feet long, and stout in proportion.—*London paper.*

To Cure a Scald or Burn.—Dissolve a piece of alum, about the size of a walnut, in a half pint of warm water, in which immerse a linen cloth. Apply the wet cloth on the part affected, and let it lie until relief is obtained.

SELECTING SEEDS.

Great improvement may be made by a judicious selection of seeds. In most all crops, some plants will be found more early, or in some respects superior to others. From such seeds should be carefully selected.

If a cultivator desires to have any production earlier than usual, after procuring an early kind, let the first seeds that ripen, on a well grown and productive plant, be secured, and so proceed year after year, and in this way a variety will be obtained that will excel in earliness.

Every variety of vegetable may be rendered more productive, by selecting every year the seeds of the most productive and well formed plants. And this method of improvement will be found the cheapest that can be pursued, as the difference in the cost of good and poor seed is a mere trifle.

Select peas for seed that grow in long, full pods, on vines that bear abundantly, and if you would have them earlier, take those which ripen first. Choose beans in the same way. Select seed corn from stalks that bear two or more good ears, and take the largest and best formed ears. Choose from stalks that are large at the bottom, and run off to a small top, not very high.

If you would have early onions and few scullions, select for seed a few that ripen first, and have a good form. Select the handsomest turneps for seed, having just the form you would choose, if you would have fine crops for the market; and by this selection for years, you will get a variety that may be relied on.

Follow the same rule in every thing. Like produces like, is a general law of nature; the same in the vegetable and animal kingdom: there are some exceptions, but not enough to affect materially the general crop of production, and by these exceptions we may profit; for when the exceptions are an improvement, we may follow them out, and in a short time establish a new race or variety; but when the exceptions are inferior, we can reject them.

These exceptions to general rules offer great advantages, and a wide field for improvement, while the disadvantage is a mere trifle. As a spark will kindle a great fire, so from a single seed of superior excellence, large crops of this superior production may be raised, and widely disseminated for the benefit of thousands.

There is no subject of improvement so much neglected as this; it is within the means of all, and yet few give attention to it. Too many are content to plod on in the old way, and while they spend much in manure and cultivation, they neglect a much cheaper way of improvement, or to avail themselves of those made by others in this way, when at less expense they could accomplish it, and perhaps more effectually.

We selected seed from the first pumpkin that ripened, in a variety which we cultivated for several years, and last year some were ripe in two months and five days from the time of planting. Numerous instances could be cited of the above remarks, but it is so clear to every common observer, that no evidence is necessary; but it is important that they be reminded of a subject so much neglected, and with so much loss.—*Selected.*

PERIOD OF GESTATION OF DOMESTIC ANIMALS.

—It is very important to farmers to know the length of time that different animals go with young. We accordingly give the period of those which most concern him as near as we can ascertain it.—*American Agriculturist.*

Mare	11 months.
Jennet	11 "
Cow	9 "
Goat	4½ "
Ewe	5 "
Sow	4 "
Bitch	2 "
Cat	8 weeks.
Rabbit	4½ "
Rat	5 to 6 "
Mouse	4 to 5 "
Guinea Pig	3 "

Period of Incubation of Domestic Fowls.

Swan	6 weeks,
Turkey	4 "
Goose	4 "
Duck	4 "
Pea-Hen	4 "
Guinea-Hen	3 "
Common Hen	3 "
Pigeon	2 "

From the American Agriculturist.

SUPERIOR BREAD.—Melt 2 oz. of butter in a pint of warm water, then add a small tea-spoonful of salt, 1½ lbs of flour, and two table-spoonfuls of yeast. Now beat well the yolks of 3 eggs and stir them in, then beat the whites to a stiff froth and stir them in also. They must be the last thing put in. Beat the whole well together from 8 to 10 minutes, or until the mixture will not adhere to the spoon. Fill the pans about three quarters full and set it to rise, which will take from 3 to 4 hours. It must be baked in the pans in which it is set to rise, and is to be eaten moderately warm.

A DUTCHESS COUNTY LADY.

AUGUSTA MARKET.

TUESDAY, December 5—P. M.

Cotton.—The market today has been rather active, and operations have been fair, with a slight advance in rates; and the firmness which characterised the market throughout last week has been fully maintained.—We quote 6½ to 8c as extremes—principal sales 7⅜ @ 7⅝ cents.

Exchange.—Checks on New York, Charleston and Savannah, are abundant at par. Central Bank 4 to 5 ℔ cent dis. Sales of State 6 ℔ cent Bonds have been made at 80, at which rate they are very firm and tending upward.

Ruffin's Remarks on the Indian Pea, &c.....193
Thomas Afflick's Proposition; Receipt for Curing Hams; do. Making Cistern Cement.....195
Very important to Farmers.....196
Barbour County Agricultural Society; Rules for Wives; Inoculating Cheese; Squashes.....197
Tanning on Plantation; Horses.....198
To our Friends; Agricultural Fair; Bommer's Manure; Large Cotton Stalk; Curious Agricultural Experiment; Swine Management; To cure a Scald or Burn.....199
Selecting Seed; Period of Gestation of Domestic Animals; Superior Bread.....200

GARDEN AND FIELD SEED.

A GENERAL assortment of fresh and genuine GARDEN and FIELD SEED, among which are the following:

Red and White Clover,
Blue and Green Grass,
Rye and Orchard do.,
Timothy and Herds do.,
Millet and Lucerne do.,
Seed Corn of every valuable variety,
Seed Wheat,
Buckwheat and Potato Oats,

Kept constantly on hand by the subscriber, all of which are offered for sale at very moderate prices. All orders, by mail or otherwise, executed with neatness and despatch.

WM. HAINES, JR.,
No. 232 Broad street, Augusta, Ga.
August 30. 18-tf

TURNEP SEED.

A SUPPLY of the following varieties of fresh TURNEP SEED just received, viz:

Yellow Sweedish or Ruta Baga, very fine for stock,
Large Globe Turnep, } Fine
" White Flat do. } for
" Hanover or White Ruta Baga do } table
" Norfolk do. } use.

For sale in quantities to suit purchasers, by
Aug. 30 18-tf WM. HAINES, JR.

AUGUSTA PRICES CURRENT.

BAGGING, Hemp	yd.	16 @	20
Tow	"	15 @	18
Gunny	"	18½ @	19
BALE ROPE	lb.	6 @	10
BACON, Hog Round	"	5 @	6½
Hams	"	8 @	10
Shoulders	"	4 @	7
Sides	"	5 @	8
COFFEE, Green prime Cuba,	"	9 @	10
Ordinary to Good	"	7 @	9
St. Domingo	"	7 @	9
Rio	"	9 @	10
Laguira	"	9 @	10
Porto Rico	"	9 @	10
Java	"	11 @	14
CORN	bush.	33 @	40
FLOUR, Canal	bbl.	6 00 @	6 50
Baltimore	"	none.	
Western	"	none.	
Country	"	4 00 @	5 50
FEATHERS	lb.	30 @	37½
IRON, Russia	cwt.	4 50 @	5 00
Swedes, assorted	"	4 50 @	5 00
Hoop	"	7 00 @	8 00
Sheet	"	7 00 @	8 00
Nail Rods	"	7 00 @	8 00
LEATHER, Sole	lb.	23 @	28
Upper	side	1 50 @	2 00
Calf Skins	doz.	18 00 @	36 00
MOLASSES, N. Orleans	gal.	31 @	35
Havana	"	24 @	30
NAILS	lb.	4½ @	6
OATS	bush.	37½ @	50
PEAS	"	40 @	50
SUGAR, New Orleans	lb.	6 @	9
Havana, white	"	11 @	12½
" brown	"	7 @	8
Muscovado	"	7 @	9
St. Croix	"	8 @	11
Porto Rico	"	7 @	9
Lump	"	14 @	16
Loaf	"	15 @	20
Double Refined	"	12 @	13
SALT, Liverpool ground	bush.	45 @	50
" "	sack	1 75 @	2 00
STEEL, German	lb.	15 @	16
Blistered	"	8 @	12½
TWINE	"	20 @	25
TEA, Behea	"	50 @	75
Souchong	"	60 @	75
Hyson	"	80 @	1 25
Gunpowder	"	1 00 @	1 25

BOMMER'S PATENT MANURE.

THE undersigned is the Agent of Messrs. Abbett & Co., for vending rights to individuals for making and using the above named Manure. By reference to the following advertisement of Messrs. Abbett & Co., the prices may be ascertained. All orders addressed to me, *post paid*, at Sparta, Ga., will receive prompt attention.

Aug. 30. 18-tf R. S. HARDWICK.

THE SOUTHERN CULTIVATOR

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SOUTHERN CULTIVATOR.

VOL. I. AUGUSTA, GA., DECEMBER 20, 1843. No. 26.

ORGANIC CONSTITUENTS OF SOIL.

Dana's Muck Manual is one of the most useful works for the farmer ever published.—The reader who will peruse diligently the extract below will be amply rewarded for his labor.—*American Farmer.*

ON THE ORGANIC CONSTITUENTS OF SOIL.

The mineral elements of soil, become part of plants. Under the influenee of the mysterious principle of life, they no longer obey the chemical laws. It organizes inorganic matter. To what laws obedient, to what purposes subservient, are the elements of soil during the brief moment in which they are endowed with life, it is not intended to inquire. Plants by their living power select from the 55 elementary substances fifteen only; of these, three are gaseous, oxygen, hydrogen, nitrogen; one, chlorine, exists only as a component of a salt, as in common salt; seven belong to the class silicates, second division, and four to the class urets.

Every plant does not, nor does every part of the same plant contain the same elements; but every part of the same plant at the same age, probably contains the same elements, united in definite proportions. Whenever plants die, their elements are again subject to the laws of affinity, and during the decay of vegetables, they return to the earth, not only those substances which the plants had taken from the soil, but also those which have been elaborated by their living structure. The former are silicates and salts, or the inorganic elements, the latter are the organic parts of soil.

In the first edition of this work, chlorine was not enumerated as an element of plants. Its presence in them was considered accidental, because its source was not detected in the rocks, from whose ruins soil has been formed. Plants are good analysts, and may detect elements where chemistry cannot; yet it is difficult to believe that chloride can exist as abundantly in soil, originally, as their presence in plants indicates, and yet elude our process. The possible existence of chloride of silican has been noticed. If this is not the source of the chlorine of plants, it must be supposed to be evaporated as a chloride from the ocean, and consequently to exist in that state, dissolved in air. If derived from this salt in soil, then that is extraneous.—Its origin was suggested to be oceanic. An examination of the rain-water of each fall, since March last, has shown that this suggestion is correct. Probably muriates are universally contained in rain-water. As, therefore, common salt, the chlorine, and soda of plants, is derived by evaporation from sea water, then as sulphate of lime has been detected in snow and hail, it becomes a question, whether other inorganic salts of plants may not have a similar origin, and exist dissolved in air.

It is thus seen that soil presents itself in a new view. Soil consists of two grand divisions of elements. Inorganic and organic. The inorganic are wholly mineral, they are the products of the chemical action of the metalic, or unmetalic elements of rocks. They existed before plants or animals. Life has not called them into existence, nor created them out of simple elements. Organic elements are the product of substances once endowed with life. This power influences the elements, recombines them in forms, so essentially connected with life, that they are, with few exceptions, produced by a living process. They are produced of living organs, hence termed organic: and when formed are subject to chemical laws. The number of elements in the inorganic parts of soil, is twelve. Oxygen, sulphur, phosphorus, carbon, silicon, and the metals, potassium, sodium, alumnium, magnisium, iron, and magnese. The number of elements in organic parts of soil, does not exceed four, oxygen, hydrogen, carbon, and nitrogen.

The great difference between these two divisions is this, that while the inorganic are simple combinations of two elementary substances, the organic are combinations of three or four elements, but never less than three. These are variously combined. They have formed the great body of vegetable products; continually changing, the mere abstraction of a part of one of their elements forms a new product. The three elements exist generally in such proportion, that the oxygen and hydrogen would, by their union, produce water without excess of either element, while the carbon would thus be liberated. It would be found free were it not also acted upon by air and moisture, and changed to carbonic acid. There is not oxygen enough in the organic part to convert the carbon into carbonic acid, and the hydrogen into water.—They are constantly changing, assuming new forms. This susceptibility of change is the foundation of tillage.

The relation of agriculture to silicates and salts, and to the composition of plants alluded to, (89.) is of the highest interest. As silicates and salts compose all the earthy ingredients of soil, so are they equally constant in plants. The deduction to be drawn from this, is the sixth principle of agricultural chemistry, *soil, consisting chiefly of one silica, or salt, is always barren.*

It is not probable that soil, thus chemically constituted, exists. Admitting such to occur, even then, when dressed with food of plants, it would not be fertile. The want of a mixture of earthy ingredients, which are as essential to the growth of plants as are air and moisture, would effectually prevent the growth of crops. Only a portion of the elements, thus essential to plants, exists in them in that state in which they exist in soil. The silica, and potash and lime, exists in plants as in soil, as silicate of potash, and sulphates and phosphates of lime and potash. When the ashes of plants are examined, we find carbonate of bases, which did not exist as such in the soil. A large portion of carbonates of lime and potash is found in ashes.

The origin of these is to be sought in acids, which, by heat, produce carbonic acid. This is the effect of heat upon all salts formed of vegetable acids. Such as tartaric, malic, citric, oxalic and acetic acids. The inorganic elements of plants exist in combination chiefly with organic or vegetable acids. Each plant forms acids, in definite quantity, proportionate to the size, age and part of the plants; the acid being constant, the bases to saturate them will be equally constant.

A curious and beautiful chemical law governs this satuaration of the vegetable acids. It is the law of isomorphism, or the law of similar forms. In minerals which are crystalized, it was formerly thought that similarity of eternal form, indicated identity of chemical composition. Later observation has established the fact that minerals and salts exist, with perfect similarity of external form, yet of totally different chemical constitution. For example, the alumina in alum, may be replaced by oxide of iron. The form will not be changed; but all its chemical properties and relations are destroyed. This is called an isomorphous substitution, of one element for another, which produces a like form. The law of this substitution is, that the body replacing another must be, not an equal, but an equivalent proportion (56;) that is, replaced by a proportion containing the same quantity of oxygen.

The relation between agriculture and this law is so wisely and beneficially ordained, that it might well be called a law of compensation, by the Natural Theologian. It is a well established fact, that plants, growing on soil containing a due mixture of earthy ingredients, always select a due proportion of each, according to their functions, yet, if to such soil an excess of either of the alkalies, or of the alkaline earths is given, an excess of potash, soda, lime, magnesia, may be taken up by the plants, to the exclusion of the usual proportion of another; hence it may be established as the seventh principle in Agricultural Chemistry, one base may be substituted for another, in an isomorphous proportion.

This is a very important law in the agricultural relations of the inorganic parts of soil.—Whatever may be the office performed by these, in the living structure, none is of higher value than this, that they may be thus substituted, the one for the other. It is a fact of the highest practical value. Its value will be perceived, when it is considered, that if soil, containg originally all the elements essential to a crop, becomes exhausted of one, yet another may be substituted, which combining with the organic acid of the plant, enables this to perform and perfect all its functions. If a crop fails, this is often charged upon the deficiency of lime in the soil. It has been already shown that this is quite impossible, yet granting it true, so long as the law of isomorphism exists, so long may potash, soda, magnesia, that is, ashes, supply the place of lime.

Isomorphous substitutions in plants, relate only to the bases combined with the vegetable or organic acids. The mineral or inorganic acids exist already saturated in the soil, as sulphates, phosphates, or muriates.

In consequence of the law of isomorphism, the oxygen is the bases of organic acid salts is a constant quantity, although ashes of the same plant may, by analysis, show a great diversity of composition; this can arise only from the fact that the organic acids exist, probably in a definite proportion in each family of plants.—The acids are formed by the essential vital functions of the plant. To the perfection of this process, the silicates and salts of the soil are not less necessary than is life to the vegetable; but though one element may be substituted for another, yet no one element may supply the place of all others. This is a problem yet to be solved. Nor may any possible mixture of mere silicates and salts give fertility to a barren soil. Fertility depends on the presence in soil of matter which has already formed a part of a living structure, or the organic elements of soil.

The inorganic are simple combinations; the organic simple in number, but wonderful complex in their combinations. It is an establish-

ed fact, that all complex compounds are unstable. They are prone to form new combinations. The more complex, the easier decomposed is any compound. The more complex the more liable to decomposition. Hence, the moment life departs, the plant or animal speedily undergoes new changes; its elements, which life had organized, obey now, not the law of life, but the laws of chemistry. The solids and fluids of a living body, when life ceases, escaping in part as air or gas, leave in a solid form, a substance differing equally from any living organic product, and from inorganic elements.—The product of the spontaneous decomposition of organic substances, still may exhibit the character which distinguishes this division, viz: complexity, great susceptibility and ease of decomposition.

Hence, in the products of the decomposition of organic bodies, a variety is formed, differing according to the circumstances, and the time, and progress of decay. However varied, there is one constant product of organic decomposition in soil, which is ever the result of that process, in or upon the earth. The product is termed GEINE. *Ge* is the Greek for earth, and the suffix *ine*, is in conformity to chemical names, given to those vegetable or other organic products, whose independent existence has been determined; for example, quinine, morphine, &c.

While the great mass of organic matter of soil, is a well defined chemical compound, termed geine, consisting of carbon, hydrogen and oxygen, there are traces of other general products of decay, which, in addition to the elements above, contain nitrogen. There is thus naturally pointed out a division of the organic matter of soil, in two classes; that which does not, and that which does, contain nitrogen.

The first class, or non-nitrogenous, comprises three substances, which have been termed, 1st, extract of soil, or of humus; 2d, geine, or humic acid; and 3d, carbonaceous soil, or humin. These are chemically the same, passing from one state to the other, without changing the relative proportions in which they were combined.

From the Southern Planter.

BOMMER'S MANURE METHOD PUT IN PRACTICE

We extract the following certificate of the value of the manure made by Bommer's process from the last number of the Cultivator.—We have in our own possession the most satisfactory testimonials of its efficiency in producing speedy decomposition, and of the *apparent* value of the manure. But nobody hereabouts has yet had an opportunity of testing its effects upon a crop; although no one who has seen the manure after it is made, seems to have any doubts upon this point. As far as our information and experience go, the time required to produce perfect decomposition is rather underated. Of course different materials will be longer or shorter in rotting, but we rather think that the average will require from four to six weeks.—But our information is drawn from experiments made during the last summer, when the process was undoubtedly much retarded by the excessive rains for which the season was so remarkable.

"*Messrs. Gaylord & Tucker.*—Being a subscriber and constant reader of your valuable agricultural publication, I frequently find there, articles on 'Bommer's Method of Making Manure.' As these articles are chiefly from the pens of agriculturists who have followed this method with entire success, it affords me unfeigned pleasure to be able, on my own behalf, also to bear testimony to the value of this method, and through the medium of your paper, to make the results of my experiments and operations known to my fellow-citizens. This I do, both for the sake of bringing before the public the great advantages derived from using the method spoken of, and the benefits insured me by its application, and at the same time in order to render a deserted tribute to the truth.

"On purchasing Bommer's method last spring, I immediately prepared a heap in the presence of a few neighbors. I followed strictly the directions laid down in Bommer's book. After the lapse of a fortnight, the heap was opened in the presence of a number of farmers, and our astonishment cannot be conceived on seeing the metamorphosis which had taken place, as we found all those weedy and stramineous materials of which the heap had been constructed, reduced to rich black manure, having an ammoniac smell, much more pungent than the best stable manure. Beholding so surprising a result, the farmers present formed themselves into a public meeting, and in that capacity nominated a committee from their midst, who were charged with the preparation of a report of what we had seen, to be sent to the agricultural press.

"I ploughed in this manure into one-half of a field intended for potatoes, and in order to institute a comparison of effects, I put the same quantity of my best stable manure into the other half of the field. The effect on the soil was nearly the same with both these kinds of manure; but the vegetation on that part of the field which had been furnished with Bommer's manure, was more luxurious and the foliage of a deeper verdure, which I attribute to the richness of the saline matter which it contains, and which alone preserved the humidity of the soil during the severe drought of this last season.—It is proper to remark also, that in the composition of the Bommer manure, I employed simply such doses of the ingredients as were absolutely necessary to insure success in the operation of making it, and if I had increased these quantities, there is not the least doubt that the result of the Bommer manure would have been very far superior to that of any horse manure.

"Perfectly satisfied with my experiment and its results, I have put up fixtures near my barn-yard for the purpose of preparing large quantities of this manure; and within the last two months I have made three heaps, which have yielded me between 200 and 300 loads of excellent manure. The last heap was composed entirely of 100 loads of sedge grass, nearly dry, with which I intermixed 40 loads of swampy matter, such as exists on my farm. All my outlay in purchasing ingredients to form the lye for this last heap, amounted to between $20 and $30, and in disbursing this trifling sum, I have made a heap of manure, which I would not dispose of for $250.

"I shall prepare other heaps of manure before the winter sets in, and those who may be desirous to see me at work and to assure themselve of the truth of what I have said, need only call at my farm, and judge for themselves. The benefits which I derive from using this method are not inconsiderable. Before becoming acquainted with it, I purchased every year from three to five hundred dollars worth of manure, which I needed over and above that of my own farm-yard, for the two hundred acres which I have. Now I do not purchase one penny's worth, and I can make double the quantity if I choose. I have the advantage of producing my manure in the sowing and planting season. I can make it more or less strong, more or less fermented, so as to suit the soil and kind of crop for which I want it; I spread and plough it while it is perfectly fresh, and consequently in all its strength. These are some of the results experienced by me in using Bommer's method of manuring land.

JERRIT KOUWENHOVEN.

Flatlands, L. I., Sept. 15, 1843."

In seasons of distress, the mind recovers itself by taking hold first of one hope and then of another, until all its functions are restored; and it feels once more, that there is pleasure in looking forward and anticipating the light and warmth of to-morrow's sun.

The range of earthly good is narrow and soon trodden; after a short time there is no variety, and the enjoyment is without hope.

CORN.

We take the following extract from "a letter from N. Goldsborough, of Talbot county, Md., to J. S. Skinner, as published page 165, in American Farmer," for the purpose of calling the attention of our readers in the South to the mode of planting corn where large yields are made—of "cyphering" a little—and that we may ask it of some friend to try the experiment of planting more corn to the acre. To the extract:

"I had grown as large corn as I had ever seen in field culture, at 4 to 4½ apart from hill to hill, and I was satisfied that the only mode of making a number of bushels per acre was, to increase the number of stalks. Accordingly, an acre was in drill 4 ft. 6 in. apart from row to row, and 18 inches distant in the row—two plants in a place—the product 123 bushels and a peck. The other acre was crossed at 3 feet each way, and two stalks to the hill—93 bushels and a peck the product. The first acre, however, was the best land."

Our readers will now please to note that at 4 to 4½ from hill to hill there are 2722 to 2151 hills, say 2722, and 5444 stalks; 4 ft. 6 in. by 18 in., 6453 hills, and 12,906 stalks; 3 ft. by 3 ft. 4840 hills, and 9680 stalks.

By the single rule of three, if 9680 stalks produce 93 bushels, 12,906 stalks will produce 123 bushels, and nearly another, wanting some 70 stalks—which was verified by the turn out very nearly. Again, we find by dividing each number of stalks by the product made from them, that it required 104 stalks and a fraction to make a bushel; and if we divide the smaller number of stalks, as we usually plant in this country, by the 104, we find the product would be 42 bushels and a fraction, which is about as good a return as we have of our choice lands.

Our notion is, if a larger product be wanted, we must resort to the same reasoning that Mr. Goldsborough adopted. We are aware that we are met at the very threshold, by the every-day expression, that "corn will not bear close planting in the South;" but this objection has become stale. Were we to listen to this kind of argument, we might despair of ever seeing any improvement effected.

We think pretty much of corn as we do of grain: if there be sun, air and strength of land sufficient to grow a crop of corn and such crops of weeds and grass as do grow, we might, with perfect safety, grow more corn. Would any one suppose that the land, having ability from named causes to grow such grass as it does, would not grow peas, or pumpkins or beans? Then why not some more corn? Admit that our summers are hot and dry; yet, if the land were shaded by early pea and potato vines, the crop would not suffer so much. And a matter of vast import—if we can, by any mode of *culture*, make double our present yield, we could take more time in the spring to plow deeper, plant better and cultivate earlier, so as to stimulate the corn to a more rapid growth and earlier fructification, therefore earlier out of the way—and if thicker on the ground, would shade the land earlier, and create less necessity for the heavy plowing in of grass, &c. We would require less land to make a larger crop, thereby giving us some time to manure, and thus add to the great ultimate desideratum of all good farmers—the permanent improvement of the soil.

We have had some little experience in these matters, if being told we would make no corn for the last three years should make it more impressive. Our crop of '40 was left thicker than we had before grown, because we could not avoid it; several who saw it said "it was a pity it could not be thinned out, it was so promising;" in '41, we left it thicker, being pleased with the yield of '40; we were told, "it is too thick," "it will not make a crop," &c.—but it did, and better than '40, because not plowed so late nor so deep when it was cultivated; again, in '43 we were told we had "left doubly as much corn on the ground as should be," that we "would not make half a crop"—and so we feared at one time ourself. That field with which our N. G.

N. was so pleased, though thin land, has been gathered, and has yielded an average of 30 bushels; and having been with the wagon, knowing how many rows it required to fill the wagon, through nearly the whole field, we verily believe much of it yielded over 40 bushels.

We have frequently, in private conversations with friends, urged the advantage of closer planting; and in each of these three crops, there were times that we feared we had "paid too dear for our whistle," not only from the general expression of opinion adverse to our plan, but from appearances. Those who plant cotton cannot give corn the early pushing that it should have, and it is made to suffer from not being plowed early enough, and afterwards also, from the necessity of plowing too deep, to enable us to cover grass. This is one reason why, at a certain period of its growth, it has an unfavorable appearance. We intend to devote a portion of our time hereafter, as well as a portion of labor and land, towards testing close planting of corn, as well as large yields of cotton, and have marked off some few acres on a piece of level land, where the pea-vine has reigned lord and master for two years, intending to try for 100 bushels of corn per acre—the land cleared in '33, in cotton some 7 years, corn 2 years, and peas 2 years—not certain but that it was in cotton 8 years and corn only one—not over ordinary land for these parts when cleared.

We are anxious to fasten it on our readers, that we can do any thing that any other people can; and then we will see attempts made at it; but so long as "we can't do this or that," is at our tongue's end we never will. Let us all try to do more towards making *our Mississippi* independent, and each other happy—and it will be done.—*South-Western Farmer.*

From the American Farmer.

THE MEDITERRANEAN OR GERMAN WHEAT.

The following communication upon the origin and quality of this wheat will be read with interest, and we sincerely thank our esteemed friend Dr. Horton for the pains he has taken to make its merits known. We agree with him that every *Country* should have its Agricultural Society—nay we will go further and say, that every *election* district should have its Agricultural Club.

Mr. Editor,—Feeling a lively interest in every thing that relates to the prosperity of the agricultural community, and having, as you know, taken much pains to find a preventive to that scourge of our staple crop, the Hessian fly I a short time since addressed a letter to James Pannell, Esq., an intelligent farmer of this county, for all the information in his possession concerning the "Mediterranean wheat." I also requested him to obtain the like information from Mr. Thomas Hope, who, I was informed, was the first to introduce this wheat to our country.

Herewith you have Mr. Pannell's reply to my letter, which, for the information of our agricultural friends you will please to publish. It will doubtless be a matter of surprise to you, as it was to me, that this wheat has been cultivated in Hartford county thirteen years! It must place some of our friends, who claim the credit of having introduced it, quite in the back ground.

NEAR CHURCHVILLE, }
21st Nov., 1843. }

Dear Doctor,—Upon the receipt of your letter requesting me to get for you Mr. Hope's information and personal knowledge respecting the "Mediterranean wheat," I wrote to that gentleman by the first opportunity, and received his reply on Saturday last, which I take much pleasure to communicate to you. He says he received it first in 1830, from the State of Delaware—it came from up the Mediterranean sea from Turkey. He sows from 1½ to 2 bushels to the acre, and it yields from 10 to 25 bushels per acre—the flour equal to that from the Red wheat, and will produce about the same price in the market. It shouled be sowed from the 5th to the 10th of September; and he never had any injured by the fly, when other wheat in the same field has been destroyed. He has *heard* of the fly injuring it, but believes that it has been from its being mixed with other kinds of wheat, which will occur. He was induced to try it on account of its having been represented to be *fly-proof, of which he is well satisfied.* It was brought to New Castle, Delaware, by a sea captain, whose name Mr. Hope does not recollect. My experience of this wheat has not been as long as Mr. Hope's (having got my seed from him) but so far as I know I agree with him as to his statement. In communicating the above, I do it with the remark, that I do not know how far Mr. Hope would like his name brought before the public. In case you should conclude to publish any statement respecting this wheat, his communication was friendly and personal, and I beg leave to suggest, if you wish to make use of his name, that his consent should first be obtained.

I have part of a field (about 2½ bushels sowing) this season, which looks fine now, and which I commenced sowing the 4th of September, and which I think will test its properties as to its resisting the fly. I mentioned to you my opinion was, that it came from Odessa, a city of Russia, up the Archipelago. Mr. Hope states it to have come from Turkey; the climates I presume were similar.

With esteem and respect, I rest, dear sir,
Your friend and servt.
JAMES PANNELL.

—

I take the responsibility of publishing the above letter without having obtained the consent of either Mr. Hope or Mr. Pannell. From the known intelligence and respectability of both these gentlemen, as farmers and citizens, their testimony will go a great way in settling a controversy which is now in agitation concerning the Mediterranean wheat. Mr. Hope's experience with it is, I presume, of longer standing than that of any farmer in the State of Maryland, and although he and Mr. Pannell, from their modesty, may have no wish to have their names brought before the public, yet I am sure from the interest they both take in diffusing correct information on a subject of such vital importance to the agricultural community, they will readily excuse the liberty I have taken.

Here is a case which shews the great importance of establishing an Agricultural Society in each county. Mr. Hope is a citizen of Hartford county, and not more than twenty-five miles distant from the writer of this communication; yet the latter had not heard till very recently, of his having any knowledge of the Mediterranean wheat. Had the information which he possessed, in regard to its being a *fly-proof wheat*, been known, it would have saved thousands of dollars to the farmers of this county—two years having occurred, since its introduction by him, in which the wheat crop was almost a total failue from that scourge, the Hessian fly.

In regard to the flour-producing properties of this wheat, Mr. Pannell has verbally informed me that he thinks it at least equal to any other. Mr. Richard Webster, an experienced miller, and one of high respectability, has expressed an unequivocal opinion in its favor upon this controverted point. In addition to this I have the testimony of several of my neighbors, which is of the same purport.

I am, very respectfully, yours,
W. L. HORTON.

Wood Lawn, Harford co., Nov. 25, 1843.

RULES WORTH BEING OBSERVED BY FARMERS.—1. Perform every operation in the proper season. 2. Perform every operation in the best manner. 3. Always keep your implements and tools in the best order. 4. Finish one job before you begin another. 5. After finishing a job always return your tools to their proper places. 6. Do not put in a crop too large to cultivate well. 7. Personally attend to every operation, and see that it be effectually done.—*Balt. American.*

From the Southern Planter.

AGRICULTURAL APHORISMS.

As the stalk of corn in the field, so the young man; both must be cultivated or their fruit will be chaffy.

Some men subsist by labor of the body, some by labor of the mind; a combination of both is important to success.

Some men write without thinking, some think without writing; the one is willing and not able, the other able and not willing.

There is no profit without capital. The merchant's capital is his money; the farmer's capital is his manure bank.

Winter time is hard by, and I venture to admonish every farmer to count his cattle, and then his hay stacks, and if the one shall exceed the other, then either sell, eat, give away, or kill the surplus to keep them from dying.

Agriculture is favorable to morals, to health, and to wealth.

Mankind might do without physicians, if they would observe the laws of health; without lawyers, if they would keep their tempers; without soldiers, if they would observe the laws of Christianity; and perhaps without preachers if each would take care of his own conscience: but there is no living without farmers.

ARGUS.

Amherst, October, 1843.

From the Baltimore American.

IMPROVED AGRICULTURE.—At a meeting of the Farmers' Club of New York, last week, the following facts relating to extraordinary results in Agriculture and Horticulture were presented to the notice of the members. We re-publish the statement for the benefit of a numerous list of agricultural subscribers of the American:—

Mr. Pell, of Ulster county, made a statement relative to his experimental farming, from which it appeared that he had found benefit from the use of Oyster shell lime—using 300 bushels per acre. That in addition he had employed 52 bushels of Charcoal per acre. That on this Charcoal dressing he obtained last summer 78 *bushels and* 24 *quarts* of wheat per acre. That he had 20,000 apple trees in full bearing. That in dry weather he had applied lime freely at the roots—found that this preserved the verdure and growth when the neighborhood was much injured by the drought. That he had cut wheat two or three weeks sooner than his neighbors; and when the roots of the straw began to turn brown and when by pressure of the finger and thumb on the grain, its milk would fly out.—That this wheat weighed 64 pounds per bushel. That he sold it for seed for $1 when ordinary wheat was 7s. That he cut clover and housed it on the same day—sprinkling about a bushel of salt over every load. That this clover retained its green color and was preferred by cattle to that saved the old way. That he dipped sponge in ammonia and applied to the worm nests on his trees and banished them completely. That he has sent to market *fvur thousand* barrels of apples, many of which go to London and there sell for nine dollars per barrel. That he employed a man from Vermont to engraft 10,000 apple trees for $150. That this man brought a company of men, two sawed off the proper limbs; two more made the proper incisions (two of them) in the back, two more inserted the grafts, two more applied a compost of wax, tallow and rosin. That out of the 10,000 grafts not one failed.

FOR TETTERS AND RINGWORMS.—Procure the roots of the yellow or narrow leaf dock, bruise them and soak them in good apple vinegar, and rub the tetter or ringworm three times in the day till a cure is effected. This is a certain remedy, except where the nails of the fingers are diseased.

ANOTHER.—Bruised mullen leaves and vinegar constitutes an excellent remedy. It is said to be a sure restorative of the nails, particularly if the patient does not become weary in well doing.

ADVICE TO FARMERS' DAUGHTERS.

A *female* correspondent of the Tennessee Agriculturist, last year wrote several communications under the signature of Lucy, containing much wholesome advice to farmers' wives and daughters, and we find she has again resumed her labors in an address to Farmers' Daughters. Her communications of last year were greatly admired and extensively copied, and we think our own readers will conclude after reading the subjoined, which is the first of her new series, that it is destined to find as much favor with the intelligent as did her former ones.—*Amer. Farmer.*

TO FARMERS' DAUGHTERS.

The desire of information is necessary in order to the acquisition of it, and as books are one of the principal sources from which we derive our most valuable knowledge, I will talk to you about them, and a few other matters this evening. A taste for reading should be cultivated by all young persons. I consider a fondness for useful books one of the greatest blessings. Without this, there are so many hours that pass away heavily and idly, and for which no good account can be rendered in time or eternity.—In bad weather, I have seen young ladies lounge about, not knowing what to do with themselves, because they could not go out to visit or shop.—The case is so much altered, when you can sit down with pleasure to a good book, and heedless whether it rain, or the sun shine, can read on, determining to improve the dark days of life by laying up those stores of knowledge so much needed in after time. You derive pleasure not only from the book, but also from the reflection, I have improved the time. I have learned something I did not know before. It is of great importance that you have the right kind of books. Many young persons read, and it would be better for them if they were ignorant of the alphabet. They read for present excitement, and of course, novels are the only books for which they have an appetite. It is my opinion, you had better not read at all, than acquire a passion for them, for it generally amounts to a passion. Girls who read many novels, lose their common sense and healthy action of mind. They dream over the love sick eloquence of the heroines, the beauty, bravery, and noble bearing of the heroes; all the great events therein related are pondered over, until the common affairs and duties of every day existence, are tasteless and disgusting, and they are thrown aside whenever it is possible, for the favorite novels. This is not always the worst evil resulting from improper reading. The splendid qualities of the heroes are transferred to some living character; it is imagined he has the deep dark and lustrous eye, the wreathing hair, the marble brow, the noble and high born grace of a Thaddeus, a Sir William Wallace, or some other imaginary favorite; and it is all the same whether he be a gambler, a play actor, or a horse thief, she believes it not: reflection is at an end, and the novelist wakes from her dream, to bear her bitter lot in the stern realities of life, without preparation of mind or heart. On the contrary, useful books impart strength and vigor to the mind, discipline it to bear the misfortunes of life, render it more capable of judging the true character of others, and of acting with discretion in all trying situations. Read for instance the life of a Franklin, a Washington, a Miss Hannah More, and you find in every page something to imitate, something to better the heart and life. In Miss M. you see a woman of true feminine grace and dignity, one who learned and taught the art of "growing old gracefully."

If you will read novels, read but few, and those selected by some one upon whose judgment you can depend. Miss Edgeworth, if I might hazard an opinion, is one of the very few whose works may be read with safety and even profit. She has sense, practical every day common sense, that is good for use. She talks about industry, economy, correct principles and actions. She possesses at the same time delicacy and propriety in all things. Better for you to read the pure morality that lives in her writings, than to pore over the passionate effusions of the corrupt Bulwer. He it is, who now writes, and forms the taste of millions, and when he talks of love, how fervently do his tones of tenderness gush forth, as if *he* had a heart to appreciate the holier sentiments of human nature. But while he thus writes, he can treat even with personal violence, the beautiful wife who loved and trusted,—who gave to him the first pure affection of her noble heart; he can separate her from her children, drive her from his home to take refuge with strangers, and even follow her with insult and persecution. But I am digressing. There is another article I will mention. Read but few books, and let your knowledge be accurate. Understand perfectly what you read, it is better to gain two ideas you can appropriate to your own use, than to have a confused idea of fifty things.—One of our great men attributes all the distinction he has gained, to the careful perusal of *one* book. The authors of purest style and most correct sentiments should be studied; while those of an opposite character ought ever to be carefully avoided. You know a woman is generally thought intelligent, if she can talk about a good number of authors she has read. I do not think it is always conclusive evidence. It is oftener a proof her knowledge is superficial.

There are but few of our sex who devote much time to study, in our part of the country at least, and you frequently find that she who has most names at the end of her tongue, has fewest ideas in her head. Some minds of uncommon strength may be improved by the study of many books; where however it is advantageous to one, it is a disadvantage to many others. A feeling of vanity is produced, and the intellect confused, rather than enlightened. Of course I speak of *young* persons. Do not look into books in order to make a show; to know their titles and a few sentences from them. I have seen young persons who would look for an hour or two into Paley, and then talk more of philosophy than others who had studied him thoroughly, and had his ideas on all matters.

Some one writing of this effort at display, says, "you can always see the bottom of the pebbly brook, but the ocean unveils not its richly gemmed carpeting." Miss Beecher, speaking of a young lady who had but *few* books, and had studied them well, mentions that "a person of information in conversing with her would always feel a constant wondering pleasure, to find she had so much more to say of this and that and the other thing than he had expected."

This cannot be said of mere smatterers you know. There are many of you who devour with eagerness, all the fashionable journals of the day; a great part of which consists of pretty love tales. Now, love is an excellent thing in its place, but reading about it all the time is not much benefit. I cannot think you derive much improvement from such studies. They produce a pleasing excitement for the time, but then that time is to all intents and purposes *wasted*. Take care of the minutes, and the hours and days will take care of themselves.

There are papers in our country you may read, and improve from the perusal, and they are those devoted to Agriculture. You may say, what have I to do with Agriculture? You have much or will have, in the course of your future life. They will teach you how to cultivate the gardens you intend to have, when you go house keeping; how to manage houshold affairs with the most ease and to the best advantage, how to do a hundred and fifty other things. A number of you will marry young doctors, lawyers, preachers, merchants, with soft white hands, who know nothing beyond their professions, and if you can learn something beforehand, and teach them common sense about going to work, and earning their living by the sweat of their brow, as the Lord intended them to do, it will add more to your own comfort than you have any idea of. After the first romance of love is over, you will want all those things that grow in the earth, and out of the earth, and you cannot gain them without a good degree of knowledge and a great deal of hard work. My maxim is, learn every thing you can, from darning socks, to decorating cows. Put it all down in your mind, or in a book. You will need it sometime or other.

To mention these Agricultural papers again, I would not be deprived of the information I gain from them, for all the love tales in the country. The Boston Cultivator, for instance, contains much that is pleasing and useful. There is always something addressed to the ladies, that makes it a welcome guest. The Yankee Farmer, thinks it one of the most proper things in life that girls learn about the "soft soap of domestic economy," while young. The American Agriculturist has a little of most all matters that are good. The American Farmer and the Cultivator will teach not only you, but your fathers, a good deal they do not know. There is a host of other Farmers and Planters, and Ploughboys and Cultivators, that I have not now time to write about, but they are all valuable for their information on business we have to attend to every day, month and year. I have but one objection to some of them, and it is, that they do not say *quite* enough for the benefit of the Ladies. One reason may be given for this, the ladies say very little to them. I have written till I am tired, I expect you will be tired reading, and will tax you no longer.

Lucy.

PROPER DEPTH FOR SEED.

Various experiments have been tried to determine the proper depth at which seeds should be put. The following is the result of an experiment with maize or Indian corn:

That which was planted at the depth of				
No. 1.	1 inch,	came up in	8½	days.
2.	1½	" "	9½	"
3.	2	" "	10	"
4.	2½	" "	11½	"
5.	3	" "	12	"
6.	3½	" "	13	"
7.	4	" "	13½	"
8.	4½	" "	—	"
9.	5	" "	—	"
10.	5½	" "	17½	"
11.	6	" "	—	"

The Nos. 8, 9, 11, were dug up after 22 days, and it was found that No. 8 had an inch more to grow to reach the surface of the earth. Nos. 9 and 11 had just sprouted, but were short, and three inches below the surface. No. 10 came up in 17½ days, but the tender leaf remained only 6 days green, and then withered. There is no experiment which shows more clearly the advantage of a shallow planting in a soil not too loose, and trodden down, than this. The more shallow the seed was covered with earth, the more rapidly the sprout made its appearance, and the stronger afterwards was the stalk. The deeper the seed lay, the longer it remained before it came to the surface. Four inches was too deep for the maize, and must, therefore, be for yet smaller grain kernels.

Petri gives an experiment made on rye, with the following results. The first column shows the depth at which the seed was put; the second, the number of days that elapsed before it appeared above ground; the third, the number of plants that came up:

Depth.	*Appeared.*	*No. Plants.*
1-2 inch.	11 days.	7-8
1 "	12 "	all.
2 "	18 "	7-8
3 "	20 "	6-8
4 "	21 "	4-8
5 "	22 "	3-8
6 "	23 "	1-8

The root-stalks forms itself always next below the surface of the ground, and if we place the grain deep, it must first put out its sprouts to the surface, and form its side branches in a nearer connexion with the air. We never find

that the slacker roots are ranged from below to above, but the contrary.

From the experiments of Ugazy, who tried seventy-six with different grains, it is clear that shallow sowing, if the seed is only so far covered as to sprout, and the germ is protected from immediate contact with the air, is preferable to laying the seed deep, because it springs up quicker, and acquires a stronger growth, and has hardier plants.—*Burger's Economy of Farming.*

THE ECONOMY OF AGRICULTURE.

Liberality constitutes the economy of agriculture, and perhaps it is the solitary human occupation, to which the adage, 'the more we give the more we shall receive,' can be justly applied. Liberality to the earth in manuring and culture is the fountain of its bounty to us. Liberality to laborers and working animals is the fountain of their profit. Liberality to domestic brutes is the fountain of manure. The good work of a strong team causes a product beyond the hard work of a weak one, after deducting the additional expense of feeding it; and it saves moreover half the labor of the driver, sunk in following a bad one. Liberality in warm houses, produces health, strength and comfort; preserves the lives of a multitude of domestic animals; causes all animals to thrive on less food; and secures from damage all kinds of crops. And liberality in the utensils of husbandry, saves labor to a vast extent, by providing the proper tools for doing the work both well and expeditiously.

Foresight is another item in the economy of agriculture. It consists in preparing work for all weather, and doing work in proper weather, and at proper times. The climate of the United States makes the first easy, and the second less difficult than in most countries. Ruinous violations of this important rule are yet frequent from temper and impatience. Nothing is more common than a persistence in ploughing, making hay, cutting wheat, and other works, when a small delay might have escaped a great loss, and the labor employed to destroy, would have been employed to save. Crops of all kinds are often planted or sown at improper periods or unseasonably, in relation to the state of the weather, to their detriment or destruction, from the want of an arrangement of the work on a farm, calculated for doing every species of it precisely at the periods and in the seasons most likely to enhance its profit.—*"Arator's" Essays.*

Tools, and Tool Sheds.—There should be attached to every farm house, a *Tool Shed*, capable of containing all the implements required on the farm, during winter, and at other seasons when not in actual use. The expense of such a convenience is a mere trifle, compared with its advantages, and would be more than economising in a few years. We have often been surprised on beholding the ploughs, carts, ox-wheels, harrows, and wheelbarrows, exposed in the yard of a farmer, who was too "saving" to pay a couple of dollars a year for a paper, and who perhaps would look upon the annual disbursement for such a purpose, as a drain upon his exchequer not "to be endured." And yet, he could complacently behold his tools rending and rusting in an exposed situation without even thinking of the loss, or the saving that might be effected simply by providing a substantial protection from the airs and rains.—*Maine Cultivator.*

Excerpts.—Brass and metal kettles should never be used in the preparation of preserves. Iron ware lined with porcelain or tin, is much preferable, and not subject to the verdigris which acids produce on the others.

Give hens chalk or egg-shells with their food, and they will lay double as many eggs as before.

A farmer should never keep more cattle than he can keep in good order. An animal in high condition the first of December, is already half wintered.

From the American Agriculturist.

TOPPING COTTON—MARL.

Sumpter District, S. C., Nov. 4, 1843.

In those excellent matter-of-fact articles on the cultivation of cotton, which have appeared in the late numbers of your paper, by Dr. Philips of Mississippi, and which, by the way, are the best I have ever seen on the subject, I do not recollect that he has touched upon the subject of topping cotton. I have made one experiment in this, and was pleased with the result.—Some planters north of us, I understand, have also tried this method, and find the cotton is not so apt to shed, as when it is not topped, especially in wet seasons. Ordinarily we reckon the first week in August the best time for topping; but this, of course, will depend upon the season, and the forwardness of the crop—for sometimes it must be earlier, and sometimes later.

I tried the effects of what I suppose to be marl, on a small spot in one of my fields, say about one acre. The marl I judge to be of poor quality, yet can not say, positively, as I have no analysis of it. I dug it out in January last, and spread it broadcast, at the rate of 30 loads to the acre, as large as an ordinary pair of mules would carry. It seemed to pulverize well, exposed to the severe frost of last winter, and I ploughed it in deeper than I usually plough, and harrowed the land well. The result is, I shall get full one-third if not one half more cotton off this piece than any other part of the field, which more than pays me for the trouble.

I need not say that we read the articles on manures in the Agriculturist with much interest; for many of us are beginning to learn that it is not only easier and better, but even *cheaper* to renovate our old lands, than emigrate to a new country and bring new lands into cultivation. C. McD.

Good Fruit.—That it is just as easy to have good fruit as poor, is a truth that every farmer should remember; and this, if acted on, will be found not only easy but profitable. If the fruit orchard is deficient in numbers or varieties, lose no time in correcting the evil; and the best way is to apply to some experienced nurseryman for the kinds and qualities most desired. A few good fruit trees of each desired variety, is far better than great numbers with inferior fruit. A *succession* of good fruits is indespensable.—The varieties of summer, autumn, and winter, should follow so as to leave no interval. Enlarge your list of different kinds of fruit, rather than your varieties of the same.—*Ab. Cult.*

Poultry Houses.—If you wish your hens to lay through the winter, have their houses cleaned out thoroughly. Empty the nests of all filth, have them scraped inside and out, and then whitewashed. Place contiguous to your henhouse, under roof, a peck or two of lime, a bushel of gravel, and a load of sand or ashes, so that they can daily have access to these substances. Give them chopped fresh meat once a week, or oftener, and feed them regularly twice a day with grain and potatoes—always feeding them near the hen-house, so as to attach them to it. Keep their nests at all times well supplied with clean hay, and a few chalk imitation eggs in each: if you have no chalk, clay will answer every purpose, provided you whiten the eggs by whitewashing them. See, too, that your fowls get water regularly. If you follow this advice, you'll find that your hens will lay nearly as many eggs in winter as they do in summer.—*Amer. Farmer.*

Preserving Manure.—If you have no barn cellar or other shelter for your manure that has accumulated in the barn-yards, pile it in a heap or heaps, and cover it all over, sides as well as top, with a muck of any kind or turf. This will prevent the escape of much of its enriching properties which would otherwise by lost. —*New England Farmer.*

From the Southern Planter.

POUDRETTE.

Mr. Editor—In your last number of the Planter you have requested information of the results of experiments tried with poudrette.—You will probably recollect, having furnished me with two barrels of the article, with which I experimented as follows: Upon English peas, contrasted with hen-coop manure; upon potatoes, contrasted with stable manure; upon onions, in *union* with hen-coop manure, and in contrast with it; upon grape vines; and upon corn in contrast with the soil; and upon early York cabbage. In every case its superiority was manifest, except with the cabbage; the peas were decidedly superior. The vines of the potato, (which I have not yet taken up) were full two-thirds better than the others. The onions were as fine as they could well be—but I could not ascertain with accuracy the difference. Its effects upon the grape vines was astonishing, and has apparently completely restored them to health and vigor. But its most perceptible superiority was upon the *corn*, the difference being fully as *three* to *one*. Why it did not appear to benefit the cabbage, I cannot conjecture. If I may take the liberty of expressing an opinion, I should say that I consider it the most valuable manure I have ever used; but I am not as yet prepared to say whether its superiority will justify the difference in price between it and other good manures. I am rather inclined to think it will not; but this opinion is not based upon a thorough knowledge of its virtues, which (it must be admitted) are very great. I purpose trying other experiments with it, and I hope to settle that point, at least, to my own satisfaction. You shall know the result. Whilst upon the subject of manure, may I ask you whether you do not think an individual, fully competent to the task, might do a good business by going round and analyzing the soil upon different farms? or has agricultural chemistry yet sufficiently diffused itself among the farmers to render them sufficiently alive to its importance?—For myself, I should be much gratified to have an accurate analysis of my land, and would be willing to pay a fair compensation for it.

Respectfully,

John B. Garland.

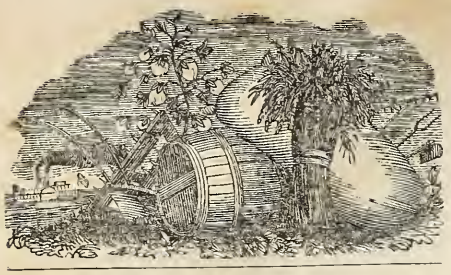
Fredericksburg, Sept. 25, 1843.

We are much obliged to Dr. Garland for his report upon Poudrette, and should be pleased to learn whether his results have been verified by the experiments of others.

Churning Butter.—Every good housewife knows that at times, for some peculiar causes, (most generally extra sourness or bitterners of the cream,) much difficulty is experienced in making the cream into butter. A lady writer in the Indiana Farmer, recommends the following course in such cases. We have (says the Western Farmer,) for years used soda or saleratus for the same purpose, and found them usually successful:—

"I wish to inform my sister butter-makers, of the means I used, which so successfully removed the difficulty. I churned, perhaps, three hours, to no purpose, and then tried to think of something that I had read in the Indiana Farmer, or some other periodical. I could not remember precisely, but I recollected the reason stated, was the cream being too sour. I then thought of soda, (pearlash, I presume, would do as well,) and dissolved a large teaspoonful in a pint of warm water, and as I poured it in, churning at the same time, it changed in a moment, and gradually formed into a beautiful solid lump of sweet butter."

Flour for Burns.—J. Marshall, Esq., surgeon, recommends, in a communication in the London medical Journal, the employment of wheat flour as an application to burns. This mild substance, he says, is doubtless pre-eminent to all others hitherto used, by imparting immediate cure to the inflamed and irritated surface.



WEDNESDAY, DECEMBER 20, 1843.

SPECIAL NOTICE.

According to the terms, the Cultivator is published on the CASH SYSTEM, and all subscriptions terminate with the volume. No paper, therefore, will be sent to the address of any gentleman until his subscription is paid. The absolute necessity for the adoption of such a policy on our part is so apparent to every man of common sense, that we need not enter into any defence of our course. We cannot afford to send a collector over the country to collect b lls of *one dollar* each, and shall not attempt such a piece of folly. Those who desire to subscribe can hand their DOLLARS to the Post Masters, and request him to order copies for them, which he can do free of any charge for postage.

☞All subscriptions must commence with the volume.

TO THE SUBSCRIBERS OF THE SOUTHERN CULTIVATOR.

The present number closes the first volume of the "Southern Cultivator," and although we cannot flatter ourself that we have given satisfaction to all, yet we indulge the belief that no one has carefully read the volume without profit; and we shall, therefore, enter upon the second volume with increased confidence in the success of the enterprisc. If we have accomplished no other good, we certainly have, to some extent, excited among a portion of our planters, a greater fondness for agricultural literature, and infused into a few a disposition to profit by the experience and practical operations of those who are far in advance of us in the science of agriculture. This we consider an important point gained; one, too, which we think will contribute greatly to the accomplishment of our great object—the introduction among southern planters of a more enlightened system of culture.

In concluding these brief remarks, we beg leave to refer our patrons to the terms which may be found on the last page of this number, and to assure them that the ensuing volume shall equal, in every respect, the one now closed; and that it may be superior, we shall contribute all our efforts, and hope to be more generally sustained in those efforts by the planters themselves than we have heretofore been. We make this last remark in no spirit of complaint, for, indeed, we feel gratified to those who have contributed to enrich our columns with their views. The writing for a paper was, however, a new thing to most, if not all, of them, and they naturally enough felt some delicacy in appearing before the public. We are, however, much pleased to observe that this feeling is giving way before the lights of truth and a sense of duty, and our planters are now beginning to feel and acknowledge the necessity of giving to each other, through the medium of the "Southern Cultivator," the results of their experience. We therefore confidently hope, that our second volume will number a much larger list of contributors than the first could possibly enumerate.

AGRICULTURAL SOCIETY IN OGLETHORPE.

The proceedings of the meeting at Bowling Green, for the purpose of forming an Agricultural Society, were received too late for publication in our last, they are, however, contained in this number; and, in giving place to them, we should be doing injustice to our own feelings towards a portion of the citizens of our native county, not to welcome them most cordially as colaborers in the great cause of agriculture, and the consequent improvement and promotion of the general happiness of the laboring class.—The cause of Agriculture is eminently philanthropic, and should enlist in its behalf, the energies of the benevolent of every class of society. What higher or nobler purpose could engage the philanthropist, than the amelioration of the condition of the great mass of his fellow creatures. And by what means can he hope to secure, more certainly, the greatest good to the greatest number, than by introducing an improved system of agriculture? We invoke our friends throughout the country to contemplate this subject with reference to the happy influence it will exert upon society, apart from the more sordid consideration of gain, in which it appeals in equally strong and forcible terms, and then determine whether or not your duty to your fellow man does not require you, as good citizens, to unite and form Agricultural Societies and Clubs in every county and neighborhood.

COMMUNICATIONS.

BOWLING GREEN, Oglethorpe county, November 25, 1843.

Agreeable to previous notice, a portion of the citizens of Oglethorpe county assembled at Bowling Green, in said county, on Friday, the 24th of November, for the purpose of organizing and forming an association to be known by the name of the Bowling Green Agricultural Society.

On motion of Ferdinand Phinizy, Mr. William Lumpkin was called to the Chair, and Jas. H. McWhorter appointed secretary.

After the meeting was organized, and its objects made known by the chair, Dr. Thomas Moody moved, that we now proceed to elect, by ballot, a President and three Vice Presidents, together with a Secretary and a Treasurer, to preside over this Society for the next twelve months.

It appeared that John W. Moody was duly elected President, and William Lumpkin 1st, Giles Young 2d, and Thomas Howard 3d Vice President, William Lewis, Secretary, and William Beasly, Treasurer.

The President, on taking the chair, addressed the Society in a brief but very appropriate address, in which he urged the importance of the agricultural interests, and the great necessity for an improved and enlightened system of culture. He concluded by offering a Constitution and bye-laws to govern the body, which were adopted.

On motion of Jacob Phinizy, Jr.,

Resolved, That the proceedings of this meeting be signed by the President and Secretary, and a copy furnished to the editor of the Southern Cultivator for publication.

The Society then adjourned to meet on the third Saturday in December.

JOHN W. MOODY, President.
WM. LEWIS, Sec'y.

GWINNETT CO., October, 1843.

Mr. Jones—Being a reader of the Southern Cultivator, I have noticed several articles on the subject of the manufacture of cotton bagging from cotton, and having some practical knowledge on the subject, I avail myself of the invitation given in your paper, to give the result to the public through its columns, with the hope of contributing something to render the planters more independent, and add to their comfort.

During the late war with England, when bagging was scarce and very high—one dollar per yard—I purchased a sley made for the express purpose of weaving bagging, forty-two inches wide, sixteen "*hier.*" At that time I grew flax, and made several pieces of bagging, as good as the imported article, which I sold for one dollar a yard. Twelve or thirteen years ago, I put up a screw for packing cotton, since which I have made all my bagging, rope and twine of cotton, which was spun upon a common wheel, and wove in a common loom in the old sley. The warp should be sufficiently stout to work two threads in a reed, and the filling coarse enough to keep the cloth the full width of the sley. Every girl that can draw a thread can spin the filling, and if the warp and filling are sufficiently stout, the bagging will be of as good quality as may be desired. I make mine to weigh from 1¼ to 1¾ pounds per yard, and in four and a half yards I pack 330 to 350 pounds of cotton. I always save the inferior cotton to make the bagging and rope, and my bales look as neat as any bales I see in market, and generally, I believe, command as good a price as any, according to the quality of the staple. None need fear of success if the thread be sufficiently stout, and the sley be of the right kind. I therefore think that almost all planters, particularly small planters, may supply themselves with an excellent article of bagging and twine of their own make.

There is another article I find greatly to my advantage to manufacture at home, which is wove in the same sley and loom—I mean blankets for servants. If made heavy and well wove, they will be as warm as, and much more durable, than the imported article. They may be made of any convenient size, and if the filling be slack twisted and neatly carded after being wove, the blanket wil do no discredit to the bed of a gentleman and his lady. My family have made their blankets for many years, and those wives and daughters who feel a desire to

excel in the manufacture of their carpeting, will find such a sley a great auxiliary, and so far as the home manufacture of these articles can contribute to our independence and comfort, we can accomplish it, and I hope that our wives and daughters have both industry and patriotism sufficient to make the effort, provided they are seconded in their exertions by their husbands and fathers.

Yours, respectfully,

ANSELM ANTHONY.

To the Editors of the Louisville Journal:

Gentlemen,—Having noticed in your paper a call on the farmers to send you their experience of this year in the different branches of farming and of the improvement of the soil, I will proceed to give you mine in the raising and ploughing under of broadcast corn. We had a field of thirty-seven acres which had previously and the year before been cultivated in corn, and the soil of which required renovating; and, believing nothing could be sown which would speedily accomplish the end proposed than broadcast corn, I proceeded accordingly. The field, previously to being sown, had not been broken up and the old stalks still remained upon the ground.

About the latter part of April I commenced sowing. Upon thirty acres I sowed two bushels of corn per acre, and upon the remaining seven three bushels per acre, and ploughed the whole under, old stalks and all, two inches deep.

It came up and all grew equally until about two feet high, when a marked difference began to present itself, and at the age of maturity that which was sown thick had scarce reached five feet high, whilst the other had attained the height of seven or eight feet. Hence we see, for two reasons, a decided advantage in favor of thin sowing: first, because it requires less corn; and, secondly, your stocks will grow both larger and taller, and from my own observation I may add that less than two bushels per acre would perhaps be advantageous. And now comes the ploughing under. Finding it impossible, with the aid of a log-chain reaching from the beam of the plough to the end of the double-tree, to turn it under as well as desired, I determined to seek some other mode, and for that purpose knew of nothing better than the roller, which I accordingly procured, and commenced rolling it down by lands of suitable width for the plough to follow. The roller is of such weight that when drawn by two horses it will mash the stalks down flat with the ground, and I can unhesitatingly say that stalks, even ten or twelve feet high, may in this way be completely turned under to the depth of four inches without injury to the horses.

Were my only object the rapid improvement of the soil, within the shortest space of time, I would not seek further or better means than first sowing down thick with rye, which I would plough under just before the time of ripening, to prevent its seeding the ground, and upon which I would sow one bushel and a half of corn per acre; thus, in the same season, ploughing under a heavy coat of rye and corn, which, in the short space of twelve months, will equal if not surpass any benefit which can be derived from clover in two years.

Though last, not least, another important advantage to be taken into consideration is, that by this double process your land is less exposed to the deteriorating effect of the sun's rays, when a rye crop is ploughed under in June and corn sowed broadcast, than when with corn alone you would be compelled, if sown early to plough under in August, and consequently your land would be left exposed to the scorching influence of an autumnal sun.

October 12, 1843.

☞ Virtue maketh men on earth famous, in their graves illustrious, and in Heaven immortal.

From the Albany Cultivator.

VALUABLE TABLE.

Messrs. Gaylord & Tucker:—A few days ago, I was much in want of some dry measures of capacity, as I have often been before; but this circumstance had never led me till then to think of the vast numbers of house keepers, especially farmers, who suffer inconvenience from the same cause; in fact, I do not believe that I should err in rating them at ninety-nine in every hundred. Why they continue to do so, they themselves can best tell; but it occurred to me that I might render them an acceptable service by publishing a list of boxes in a square form, which I made out for my own use, to contain the following quantities: a barrel, half barrel, bushel, half bushel, peck, half peck, gallon, half gallon, and quart. The square shape was preferred, as being far easier, both to make and to calculate, and the list was immediately sent to my friend Mr. Ruffin, editor of the Farmer's Register. But, as many read your Cultivator who never see his paper, I now send the same statement to you, that you may publish it, if you think it may be useful. A similar table is not to be found in any book that I have ever seen; although it is perfectly obvious to every body that it is much wanted. The advantage of buyers especially, would be considerable; for they could always ascertain whether they received their proper quantity of any thing sold by dry measure, if they would only carry the table in their memories, or on a memorandum, together with a small rule in their pockets.

—

TABLE.

A box 24 inches long by 16 wide, and 28 inches deep, will contain a barrel, or 10,725 cubic inches.

A box 24 inches long by 16 wide, and 14 inches deep, will contain a half barrel, or 5,376 cubic inches.

A box 16 inches long by 16 8-10 wide, and 8 inches deep, will contain a bushel, or 2,150 4-10 cubic inches.

A box 12 inches long by 11 2-10 wide, and 8 inches deep, will contain one peck, or 537 6-10 cubic inches.

A box 8 inches long by 8 wide, and 4 2-10 deep, will contain a half peck, or 268 8-10 cubic inches.

A box 7 inches long by 4 wide, and 4 8-10 inches deep, will contain a half gallon, or 134 4-10 cubic inches.

A box 4 inches long by 4 wide, and 4 2-10 inches deep, will contain one quart, or 67 2-10 cubic inches.

These measures all come within a small fraction of a cubic inch of being perfectly accurate, as near, indeed, as any measures of capacity have ever yet been made for common use; the difficulty of making them with absolute exactness has never yet been overcome.

In addition, gentlemen, to the motive already stated for making this communication to you, I offer it as some small return for the instruction and entertainment which I have already received from your highly useful paper; and beg you to accept my very sincere wishes for its future prosperity.

I remain, gentlemen, very respectfully, your obedient servant, JAMES M. GARNET.

From the Southern Planter.

GALLS AND GULLIES.

Mr. Editor.—From the wretched system of cultivation in many parts of Virginia, the farms present an uncomely aspect from innumerable galls and gullies. Experience has taught me that these may be stopped without any very great labor. Every one in the field intended for corn, ought to be stopped. It is the more necessary, because observation will soon teach one that when the hill sides are deeply ploughed and kept well cultivated, that but little superfluous water passes down the gullies; and hence there is less danger of their washing out after having been filled up. The best time for the operation is as soon as the land thaws after a severe freeze; or during some wet time when it would not be proper to work in the fields. I commence by running a two horse plough up one side and down the other, so as to throw the dirt into the gully. The horse next the gully should be coupled to the other by a long cord, and that to the trace of the other below the attachment of the backband. This precaution will be found necessary, so that if he fall in he may not pull his fellow after him. The gully is a convenient deposit for any thing that may lie in the way, such as logs, stumps, rocks, brush, &c., but they are by no means essential for the success of the operation.

It is generally necessary to have some hands with hoes, mattocks, &c. as there are many places that the plough cannot reach in consequence of the zigzag form of the gully, until some digging be done. Also many have forks, or prongs, so that the ploughing cannot be done until a crossing place be made near the main gully.—I am in favor of continuing the operation only until the place becomes such that a single horse plough can cross with ease, and then leave the balance to the gradual washings of after years. When I have arrived at this stage I cover the whole place well with manure and sow small grain, (or peas,) and turn in the manure and small grain together, and then sow a mixture of different kinds of grass seeds with plaster of Paris, and cover the whole with straw.—In a few days the grain will put up through the straw and hold it so closely to the earth that the most washing rain will not remove it. I prefer a mixture of red clover, herdsgrass and greensward seeds.

In the subsequent cultivation of the field the gullies should remain untouched by the plough or hoe; and in a little time the grass will form such a sward as to catch a sufficiency of dirt, during the washing of rains, to render the original gully nearly level.

Those who have not tried this plan may be incredulous; but such as doubt, may examine my farm and see for themselves, that gullies thus treated, have seldom been injured by washing rains. It is often the case that less time will be required to stop a gully than would be lost in turning the plough during the cultivation of the crop.

Every farmer ought to get clear of his gullies in four or five years, according to the number of shifts he may have on his farm.

I can say but little of the efficacy of hill side ditches to prevent gullies from washing out, but do not doubt their usefulness. I should have tried them if my professional engagements would have permitted me.

If the foregoing shall not benefit any one, it may serve to elicit information from some person more competent to instruct.

R. D. PALMER.

October 28, 1843.

HINTS TO YOUNG FARMERS.

CULTURE OF THE MIND.—You know well that one piece of land, a garden for instance, yields vastly more than another piece of ground of equal natural fertility. And you know equally well, that one man abounds more in knowledge and usefulness, than another to whom nature has been alike bountiful. It is culture—it is the industry and perseverance of man exerted in one case and not in the other, that produces the marked contrast in both. The cultivator is sure to be rewarded in his harvests, for the care and labor which he bestows upon the soil—and the reward is no less certain to him who devotes his leisure hours to the culture of the mind.—The soil administers to our annual wants.—Knowledge not only greatly assists in supplying these wants, but is the primary source of intellectual wealth, which dollars alone cannot give; and when consorted with good habits, tends to refine, elevate and distinguish men above their fellows. Talent is not hereditary.—You will see on looking around, that some of the most distinguished men of our country have sprung from the humblest parentage. They

are indebted for the distinction, to the culture which they themselves bestowed upon their minds. The road to usefulness and honorable distinction is equally open to you, and the time has arrived when you must decide, whether you will compete for the noble prize.

If you wish to prosper in your business—to know and profit by the improvements of the age, cultivate your mind; for this is the great labor-saving machine. If you wish to see your children intelligent, thriving and respected, teach them, by example, to cultivate the mind. If you would be useful to your friends, and merit the confidence and esteem of your neighbors, seek early to qualify yourself for the duties of social life, by the culture of the mind, if you aspire to intellectual enjoyments which flow from the study of the material world—from the order, harmony and beauty, which meets us in every walk, in the manifold and wonderful works of the creator, cultivate the mind. In fine, if you would prosper in your business, your family, and in society, cultivate your mind.

But knowledge is not always wisdom, and therefore, be as scrupulous in regard to your studies, as you are in regard to the seed which you deposit in the soil. You will reap whatever you sow, and the mind is as liable to be cumbered with weeds as the soil. Read, therefore, whatever tends to instruct you in your business, to establish you in good habits, and to fit you for the responsible duties of life. Acquaint yourselves with the inventions and improvements of modern art. Make yourselves acquainted with the general facts of science, with the wondrous laws by which the Almighty governs all these around us; and with the endless illustration of laws, in the world and all its parts. The facts of natural history will afford abundant matter for agreeable and useful knowledge. The plants, the animals, the minerals, the soils of your country—the changes of the seasons—the make and composition of all that surrounds you duly observed, and made the subjects of reading, of conversation, of reflection, will at once store your mind, and raise your ideas of the wisdom and goodness of Him who formed you such as you are. Temperance, self-government, moderation, avoidance of all abuse of the body, are written in the very make of the body itself. And it will hence plainly appear, that when our maker says, abstain from all impurity, he does but say, "Do thyself no harm."

Who aims at excellence, will be above mediocrity; who aims at mediocrity, will fall short of it.

We copy, says the South Western Farmer, from our scrap book, two recipes on the subject of curing bacon. The first for hams, we know not how we came by, but would be a little fearful that the ley would eat up the skin, having observed it eaten, when packed away in ashes not well leached.

Hams.----Take 12 lbs. salt, 1 lb. saltpetre, 1 gallon molasses----with this mixture, rub the hams well and pack away as carefully as is possible in a cask, to remain one week. Then with 1 bushel of ashes make a ley, put the hams in it, to remain 3 weeks. Smoke and pack away in tan bark. This for 12 hams.

Bacon.----The gentleman who gave the following to us, some 10 years ago, was somewhat advanced in life, a citizen of Ohio, and one of those who had boated down the Mississippi, in those broad horns, and walked through "the wilderness," as all this country was then called. We copy his directions, word for word. To ensure good bacon, it must be good corn fed pork, cold before salted, salt rubbed in hard, and let lie for 24 hours. Prepare you pickle, by taking 1 oz. saltpetre, 1 oz. pearl ash, 2 quarts molasses, enough salt to fully saturate water sufficient to cover 200 lbs pork in a barrel; the pork may be packed close in a barrel with a little salt, then pour on the pickle----cold, when any scum rises remove it. Let the pork remain 5 to 6 weeks, then smoke well, then dip into strong ley, and return it into pickle---bugs will never trou-

MR. BOTTS' ADDRESS.

The following notice, in which we fully concur, of the address of Mr. C. T. Botts, editor of the "Southern Planter," before the Henrico Agricultural Society of Virginia, reminds us of a duty, heretofore omitted, of acknowledging the courtesy of the author in sending us a copy.

"We have perused the address with great pleasure. It takes a rapid view of agriculture, its importance as a science, the deep interest which the South has in it, and the bearing which it has upon our Republican institutions. The author urges upon the society to redouble their exertions in the good cause in which they have enlisted, and we doubt not his suggestions will meet with a hearty response from the members of the Henrico Society."

Dignity of Labor.—In many portions of Europe, to labor is dishonorable. In this countsy, it is honorable, for here an idle man is a nuisance. An author says: "The American motto is industry. Labor is honorable—idleness is dishhnorable; and I care not whether it is the labor of the head or of the hands, for they mutually aid each other. Let me, however, exhort those who are devoted to intellectual pursuits, to cherish on their part an exalted and just conception of the dignity and value of manual labor, and to make that opinion known in their works, and seen in their actions."

CONTENTS OF THIS NUMBER.

	PAGE.
Organic Constituents of Soils	201
Bommer's Manure Method put in Practice; Corn	202
Mediterranean Wheat; Rules worth being observed; Agricultural Aphorisms; Improved Agriculture; Tetters and Ringworms	203
Proper depth for Seed; Advice to Farmers' Daughters	204
The Economy of Agriculture; Tools and Tool Sheds; Excerpts; Topping Cotton, &c.; Good Fruit; Poultry House; Preserving Manure; Poudrette; Churning Butter; Flour for Burns	205
Special Notice; to the Subscribers of the Southern Cultivator; Agricultural Society in Oglethorpe; Bowling Green Agricultural Society; Home made Cotton Bagging, &c.	
Sowing Corn Broadcast; Valuable Table; Galls and Gullies; Hints to Young Farmers	207
Recipe for Curing Hams; do. Bacon; Mr. Botts' Address	208

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Shoulders	"	4	@	7
Sides	"	5	@	8
Coffee, Green prime Cuba,	"	9	@	10
Ordinary to Good	"	7	@	9
St. Domingo	"	7	@	9
Rio	"	9	@	10
Laguira	"	9	@	10
Porto Rico	"	9	@	10
Java	"	11	@	14
Corn	bush.	33	@	40
Flour, Canal	bbl.	6 00	@	6 50
Baltimore	"	none.		
Western	"	none.		
Country	"	4 00	@	5 50
Feathers	lb.	30	@	37½
Iron, Russia	cwt.	4 50	@	5 00
Swedes, assorted	"	4 50	@	5 00
Hoop	"	7 00	@	8 00
Sheet	"	7 00	@	8 00
Nail Rods	"	7 00	@	8 00
Leather, Sole	lb.	23	@	28
Upper	side	1 50	@	2 00
Calf Skins	doz.	18 00	@	36 00
Molasses, N. Orleans	gal.	31	@	35
Havana	"	24	@	30
Nails	lb.	4¾	@	6
Oats	bush.	37½	@	50
Peas	"	40	@	50
Sugar, New Orleans	lb.	6	@	9
Havana, white	"	11	@	12½
" brown	"	7	@	8
Muscovado	"	7	@	9
St. Croix	"	8	@	11
Porto Rico	"	7	@	9
Lump	"	14	@	16
Loaf	"	15	@	20
Double Refined	"	12	@	13
Salt, Liverpool ground	bush.	45	@	50
" "	sack	1 75	@	2 00
Steel, German	lb.	15	@	16
Blistered	"	8	@	12½
Twine	"	20	@	25
Tea, Behea	"	50	@	75
Souchong	"	60	@	75
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Aug. 30. 18–tf R. S. HARDWICK.

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A SEMI-MONTHLY JOURNAL,

Devoted to the

INTERESTS OF SOUTHERN AGRICULTURE.

DESIGNED TO IMPROVE THE MIND,

AND

ELEVATE THE CHARACTER OF THE TILLERS OF THE SOIL,

AND TO

INTRODUCE A MORE ENLIGHTENED SYSTEM OF CULTURE.

EDITED BY J. W. JONES.

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INDEX TO THE SECOND VOLUME.

A.

Address, Eli H. Baxter's 9, 18
" of Hon. Chas. Dayan, 26
" Extracts from Mr. Hudson's 33
" John L. Hunter's 65
" by John Belton O'Neall, 170
Agriculture, false estimate of 21
" in common schools, 124
" as a science, 52
" in the United States, 116
Agricultural Address, extract from Dr. Lee's 4
" Societies, 15
" Society, So. Ca. State 88, 141, 156
" " Barbour County 110
" " Newberry, report of 186, 187
" " Houston Co. 87, 170
" Debating Society, 31
" Meeting in Walton Co., 95
" Fair, 86
" Institute, New York 148
" Improvement, 5
" Experiment, 127
" pursuits, 140
" Journals, spirit of the 149
" Report, extract from Coleman's 154
" Errors, 123
" Curiosity, 133
" papers, 7
" " for distribution, 47
" " the effects of illustrated, 60
" publications, 181
" Machinery, improvement in 50
" Legislative Aid in Promoting 120
" the advantage of science to 37
A Hint, 176
A Short Chapter of Experience, 145
A wife worth having, 21
American Notions, 184
Annual Report of the Commis'r of Patents, 81
An Independent Woman, 110
Apples, preservation of 176
" overeating, cure for 192
Arkansas Insects, 141
Artichokes, Jerusalem 28, 174
Asparagus, culture of 48
Ashes in the hill, 104
Away to the Woodland, 136

B.

Beans, Lima 80
Beautiful Incident, a 198
Bees, 30, 53, 112
Bee Moth, 112
" Hive, patent endless 112
Bed Bugs, to destroy 119
Beds, Comforters, Mince-pies, 54
Blackberry Syrup, 142
Black-bird, the 117
Blind Staggers, cure for 111
Bloody Murrain, cure for 53
Bommer's Patent, Letter of Mr. Ellsworth, 13
Borders of Fields, improve the 112
Botany, 202
Bots, etc., remedy for 55
Broom Corn, 63, 72
Bruise or Sprain, lotion for 8
Burns, cure for 23, 103
Buckwheat, 125
" Cakes, 200
Butter, green cornstalks make rich 5
" scalded milk for 24
" good 80
" novel method of working 88
" to make yellow in winter, 186

C.

Cabbage, new 175
" heads from stumps, 3
" worms on 95
Cancer, cure for 72
Candles, how to make 38
Carried away by intense feeling, 208
Caterpillars, to destroy 80
Cattle Distemper, 93
" remedy for lice in 56
Chemistry in Common Schools, 174
Chickens, gapes in 151, 163
Chymistry, the farmer's first lesson in, from Punch, 157
Clean Culture, 138
Clover, Herdsgrass and Timothy, 93
Coal-tar as a paint, 159
Cob-meal, 56
Cockle Burr, 143
Collars vs. Yokes, 125
Cold Starch for Linen, 181
Comfrey, 155
Comparative value of articles used as food, 141
Consumption, cure of 181
Corn, 38, 51
" Indian, 43
" curing 15
" great yield of 6, 79
" a new variety 8
" best method of curing 15
" successful culture 21
" sowing broadcast 29
" culture of 39, 73
" large crop of 45
" Williams' premium essay on the cultivation of 36, 42, 122
" measuring 72
" Orleans Co. premium crop of 79
" close planting of 91
" report on Indian 108
" the way to make a light crop of 113
" tall 134
" Cobbs, 39
" Mill 168
" and Crows, 80
Correspondents—Ourselves, 55
Cotton, blue 2
" culture of 73
" benefit of manure for 45
" preparation of 7
" improved culture of 12
" in India, 24
" growth of American in India, 206
" growing 30
" topping 45
" culture of in Georgia, 64
" premiums 75
" preparing for market 145, 151
" to regulate price of 153
" planting too much 188
" crop of, in South Alabama, 197
" planters, suggestions to 62
" gin, new and improved 181
" seed, Texas 47, 183
" on the introduction of 83
" Gin, 83
" memoir on the origin, cultivation and uses of (review,) 103
Cow, pigs sucking a 119
Cows, drink for after calving, 166
" currying 46
" holding up their milk, 53
" teats, warts on 64
" food and pasture for 88
" average yearly produce of a 90
" points of a good milch 134
" continuance of milk in 189
" the best 190
" valuable 11
Cow-pea, peach, &c., 94
Country Life, 109
Cream in Coffee, substitute for 112
" new method of obtaining 99
Crops of 1843, estimate of the 85
" the 103
" great 95
" alternation of 84
" rotation of 100
" change of 124
Croton Water, 112
Croup, cure for 103
Cutting Grain Early, 128
" Timber, 176

D.

Diarrhæa, a recipe to cure 168
Ditching, hill-side 1
" " manuring, &c., 98
Domestic Animals, organic improvement of 146
Don't Kill the Birds, 126

E.

Early rising, illustration of 48
Eau de Cologne, 181

Economy, 109, 169
Editorials, etc.—6, 14, 22, 31, 39, 47, 55, 63, 71, 79, 87, 95, 103, 111, 119, 127, 135, 143, 151, 159, 167, 175, 183, 191, 199, 205.
Editorial Remark, 64
Eggs, hen's 111
" to distinguish male and female 2
Emigration, 95, 121
Every Man his own Cattle Doctor, notice 87
Extract, 113

F.

Face Ache, 104
Fair, 86
Farm Stock, improvement of 96
" Labor, economy of 180
" conversation on the economy and management of the 195
Farms, small 64, 93
" " and Thorough Cultivation, 180
Farmer, knowledge for a 127
Farmers, essay on the interests and duties of American 76
" Hints to 39
" Young, hints to 16
" important facts for 5
Farmers' Boys, 16
" Boys, amusements for 134
" Daughters, to 133
" " to 185
" Wives, qualifications of 20
" Life, the 31
" Ode, the 146
" young, catechism, 110
Farming in Connecticut, 111
" at Cape Cod, 140
" new mode of 125
" thrifty and unthrifty 137
" scientific, results of experiments 120
" book 14
" manure is the principal thing in 207
Fecundity, extraordinary 87
Feeding Milch Cows, on 126
Fences—Stock—Manure, 173
Fence Posts, 103
Fields, improvement of old 29
Flowers, love of 72
Flour, nutritive properties of 111
Fodder, sowing corn for 85
Food of Vegetables, use and preparation of the 26
" comparative nutriment of 135
Founder, cure for 161
Fowling Piece, how to clean a 117
Fruit Trees, pruning 161
" " do natural outlive the grafted 163
" " plant 160
" profits of raising 167
" at the South, 204

G.

Gardening, 27
Geese, utility of to the Farmer, 107
Gin Band, cheap 111
Glanders, the 135
Go to Work, 159
Good and Bad Management, 196
Grafting, fall 165
" wax, 62
Grapes, use of 165
Grass Land, time of spreading manure on 80
Grease Spots, 54
Growing Mustard Seed for Feed and Enriching Soils, 128
Grubs, cure for the 55
Guano, 127
" the history of 174
" mode of applying 116
" to detect adulteration 159

H.

Halo, or Solar Phenomenon, 160
Hams, to preserve through summer 141
Hard Milking, remedy for 80
Harrowing Grain, 88
Harvest Drink, 95
Haw or Hooks, the 183
Hay, equivalent of various plants to 21
Hemp and Flax, 192
Hen-house, 186
Hens, management of 199
Hoarseness, 72
Hog, to ascertain the weight of a 31
Hogs, spaying 74
" fine 15
" cockle-burr a poison for 143
" to kill lice on 55
" Berkshire 206
" and Cattle, pea-fields injurious to, and remedy for 31, 47
Hollow-horn, remedy for 5, 17
Home, love of 24
" affections, 104
" the pleasures and advantages of remaining at 45
Horn Distemper, 150
Horse, lockjaw in a 23
" to take film from the eye of a 103
" cure for a foundered 87
" curing a vicious 56
Horses, salting 95
" and Cattle, to kill lice on 55
Horseradish, 88
Horticulture, lecture on the elements of, by Thos. Affleck, 58
Hotbed, novel 136
Humbugs, 114
Husband, to select a good 37
Hymn to the Flowers, 56
Hysterical Lockjaw, effect of electricity in curing 152

I.

I have no time to read, 118
I journeyed on to sunset skies, 142
Imports and Exports of So. Ca. in 1843, 147
Improvement, 148
" progress of 15
" of the Soil and Mind, 54
Improving Land by Green Manures, 183
Indigo, culture and preparation of for market, 57
Individuality, 155
Individual Effort, 175
Industry, 90
" commendable 5
" reward of 16
Inquiries of a Correspondent, 95
Insect Trap, an 88
Irrigation, 147
Irony—poverty, exquisite 64

J.

Jelly, making 152

K.

Knowledge is Power, 123

L.

Lambs, sprit for chilled 142
" take care of the 72
Land, clay, on the improvement and profitable cultivation of 178
Lands, warming 104
" reclaiming exhausted 140
Letter from Thomas Affleck, 46
Level, form of a 167
Liability of a Husband, 128
Life's Lesson should be, 184
Lime, 30
" use of 29
" quantity of, per acre, 32
" on Soils, action of 118
" and Salt, 103
Liming Land, 174
Lucerne, 143
" cultivation of 179

M.

Madder, on the cultivation of 132
Manure, a new method of making 30
" leaves good for litter and 16
" compost 99, 168
" compost, making 119
" plowing in green crops for 102
" on the right use of 68
" a good plan of making 75
" wasteful management of 100
" shell fish as a 161
" great waste of 166
Manures, 40, 135
" Dana's prize Essay on 34, 41, 82, 89, 101, 105
" accumulation of 207
" report of Bowling Green Agricultural Society Committee on 86
" calcareous, observations on their practical application and effects, 115
Manuring, necessity of 38
" in the hill, on 173
" new system of 205
Marl, experiments with 147
" analysis of blue 167
" remarks on, &c., by a correspondent, 75
Marling, particulars of the experiment of 160
" in South Carolina, 144
" and Liming, 3
Married Men, 178
Mattress, a new fashioned 180
Mile, 208
Mississippi, her Agriculture, &c., 69

N.

National Industry, products of 141
Night-soil, 204
Nut Grass, to destroy 80

O.

Oil, castor 120
" corn 103
Okra, 63
Olive, the 190
Onions, potatoe 192
Oration, delivered before the Alumni Society of Franklin College, by the Rev. Geo. F. Pierce, 193, 199, 201
Our Third Volume, 183
Overseers, 97, 107, 114, 123, 153, 169, 177
" duty of 166
Overcropping, 113

P.

Paralysis, 141

Pea Vines, curing 159
Peach, the 165
" Trees, 128
" Trees, decay of 173
" Stones, 53
" " planting of 51
Perseverance, a farmer rewarded by 197
Pickles, 134
Pies, a recipe for Dr. Henkel's best 181
Planters, observations to 190
Planters' Club of Hancock, 23, 167
Plant Lice, soap-suds to kill 142
Plowing, 17
" subsoil, 48, 139, 181
" fall 158
" Corn—Topping Cotton, 71
" Orchards, 164
Plow, labor-saving 161
" subsoil, a new 111
" steam 157
Plum Trees, oil destructive to 21
Potatoe, the sweet 40
Potatoes, 151, 189
" experiment with 88
" observations on sweet 22
" experiments in raising 37
" Irish 86
Poultry, value of in United States, 111
Pride of China, 117
Productive Powers of Nature, 67
" Farms, 165
Professorship of Agriculture, 183
Prospectus of the Third Volume, 191
Punch on Long Dresses, 120
Pudding, a new 135
Pumpkins, preservation of 189
" great yield of 176
Purifying Water, simple mode of 86

R.

Rattle-snake, bite of a 104
Razor, how to have a sharp 21
Reapers' Harvest Song, 158
Recipes, 125
Remarks by a correspondent 49
" of an Old Correspondent, 206
Roots vs. Hay, 82
Root Culture, 84
" " and Rotation of Crops, Deep Plowing, 138
Ruffin's Survey, extracts from 129
Rural Embellishments, 134
Ruta Baga, culture of 100
" " as Food for Cattle, 115

S.

Saddle-galls, 103
Salve, valuable, 79
Salt, an injury to stock 52
" and Soot, 143
" as a fertilizer, durability of 142
Saltpetre on Seeds and Plaster on Flowers, 166
Salutary Restriction, 136
Scare-crows, 104
Scours in Calves, 64
Seasonable Remarks, by a friend to economy, 31
Seed, selection of 75
" proper depth of 125
" save your own clover 168
Seeds, vitality of 2
" saving 152
" valuable 47
Seedsmen, a hint to 159
Sheep, 191
" Merino 203
" age of the 53
" experiments with, to control the sex of lambs, 134
" sprains in 103
Show of the Agricultural, Horticultural, and Botanical Society of Jefferson College, 115
Sick Animals, treatment of 109
Singular case, a 112
Soil, effects of deepening the 24
" sandy, clay as an amender of 102
" analysis of 103
" pulverising the 100
Soils, table of 143
" improvement of clay 91
Smithsonian Bequest—Model Farm, 206
Smut, salt a preventive of 3
Soap, soft, recipe for making 191
Southern Agriculture, 130
" Products, 132
Speech, substance of a, delivered before the Spartanburg Agricultural Society, by Col. E. C. Leitner, 25
Spider Bite, cure for 151
Spiders, habits of 24
Squirrels, grey 136
Stains, to remove 62
Stock, feeding 63
" native 185
Strawberries, 110
" extraordinary 87
" manuring 78
Substitute for Slave Labor, 151
Sugar, maple 141
" cornstalk 22, 39, 51
Sunflower, the 128
Swine, cooking food for 191
Swiney, cure of 58

T.

Take Care, 77
Tart, tomato 159
Tea, North Carolina 23
Teeth, blind 64
Terms, explanation of 27, 42
To make Water Cold in Summer, 104
Things that I have seen, 93
" " do not look well, 112
Tooth Ache, 112
Turkeys, fattening 124
The Physician an Agriculturist, 126
Tomatoes, to preserve 126
Turneps and Turnep Liquor, 139
Turnep Fly, to protect the plant from 29
To clean brass, 117
To our Patrons, 205
Too much Land, 140
Twitch Grass, the way Friend Hanson murders 142
Tree, mending a 152
Trees, trimming, the season for 117
Treating cucumber bugs to eggs 111

U.

Useful Plant, a 127

V.

View from the Pyramids of Egypt, 205
Vinegar, 192
" sugar 72
Vines, to prevent the bleeding of 46
" to protect from bugs 104

W.

Wages of Farm Laborers in England, 157
Wells, bad air in 104
Wet Lands, 77
" " reclaiming 149
Wheat, 164
" great yield of 11, 116
" sixty bushels to the acre, 72
" prevention of smut in 20
" use of charcoal as a manure for 68
" how my friend Cook raises 79
" what is the proper food of 85
" disease of—Preventive measures, 117
" culture, philosophy of 138
" the smut in 139, 146
" culture, 157
" China 181
White Wash, 74
" " and Paint, 92
Who can beat it, 11
Wife, to select a good 48
Willis Gaylord, death of 55, 78
Wood, recipe to render incombustible 20
" green and dry 93
Wool, 143, 175
" growing in Alabama, 149
" growers, hints to 163
" Trade, the 181
Woman, the physical education of 92
Women, married, a hint to 64
Work for September, 150
" " October, 162
Worn-out Lands, 161
" " restoration of 52
" " improvement of 86
" " scooter and shovel plows, 98

Y.

Yankee Wager, a 141
Young Ladies, to 53
" Men, hints to 126
" men, to—truth well spoken 52

SOUTHERN CULTIVATOR.

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COMMUNICATIONS.

SANFORDVILLE, PUTNAM COUNTY, January 1, 1844.

Mr. Editer—As the time for ditching hill-sides is fast approaching, (the proper time being from the first of February to the first of April, when the earth is soft to any desirable depth,) I shall undertake to comply with my promise to your correspondent of Newnan, who desires that I should give my mode of ditching, with all the practical information I am possessed of on that subject. The subject is one of so much importance to planters and farmers of any hilly country, (particularly one of thin soil,) that I am inclined to shrink from my promise, fearing I shall fail to do it that justice it so much demands. But if I shall be able to give any instructions to the readers of your paper, on a subject that they should be so deeply interested in, as that of ditching their hill-sides to prevent what soil we have left from washing off, I shall consider the time consumed in writing, as well as from other considerations, well spent. Let me assure your correspondent, as well as all the readers of your paper, that all the practical information I am in possession of, in every branch of husbandry, both in and out doors, appertaining to our domestic concerns as planters and farmers, is at their service; although I am ready to acknowledge that I am like most other planters in the management of my plantation affairs, viz: I know a great deal better how things should be, than I have them in general.

I shall not pretend to claim the honor of conceiving an idea which has, and will, confer such lasting benefits on the planting and farming interest of our country as that of ditching hill-sides; that belongs to some one of greater forethought than myself. But so far as I know, I am the first that introduced it in this section of the State, and the first to put it in practice in any thing like a scientific manner; though my date goes no farther back than ten years. I brought the theory, as well as a little practice, with me when I moved from Virginia in 1832.

The first ditching I done in this State, was a small hill-side, of 4 or 5 acres, then partly in gullies, and had it not been improved, and the former mode of cultivation been persevered in, before this the little soil left would have been gone, and it would now be worthless. But I have the pleasure to inform you, that it is now almost entirely clear of gullies, and some parts of it are more productive than when I first ditched it. This, however, is owing to several sprinklings of manure it has been treated to.

I have ditched more or less every spring for the last ten years, and yet have more to do the coming one than I have ever done in any one season. This is partly owing to an addition to my farm—which is all quite broken. Indeed, there are but few acres, if they were all together, that would not be benefited by ditching.

The spirit of ditching is considerably on the increase in this section; but I am sorry to see so little of what is done, well done. We often hear it remarked about matters pertaining to our plantation affairs, that any thing well done, was worth more than being half done twice. This is strictly true in reference to ditching, which, once thoroughly done, is of more benefit than a dozen times partially or half done. I have seen the bad effects, and have felt the smart, for half doing things, and in nothing more forcibly (that I now recollect) than that of ditching. A half made ditch will do for dry weather, or for light rains, but when such rains as we frequently have in this latitude fall, those who have half made ditches will find them, on examination after the rain, destroyed by the water that had collected in them, and the land worse off, in many places, than if there had never been a ditch.

Perhaps my friend of Newnan will become impatient at reading this communication before he comes to the descriptive part, or that giving my plan of ditching. I will, therefore, make that the next thing for his consideration, with the hope that he will receive some benefit, of which I have no doubt, if he will but practice upon my suggestions.

In the first place, I have a level made similar to the one described by Mr. Hunt in the Southern Cultivator some time last spring, perhaps in April, only mine strides but 10 feet, with a cross piece about half way from the top to the ground. One of the size of mine is more handy than one that strides fifteen feet. The fall given to a ditch is two inches every ten feet; though in locating a ditch, one should not be governed by his plum line at every stride, as it is advisable, in some instances, to cut the ditch deeper in some places than others, so as to form it in the best shape that the location will admit of, and to prevent sudden curves. I have my ditches cut from 15 to 20 inches wide at the top, and at least 12 inches deep, with a square bottom of at least 12 inches wide; throwing all the dirt on the lower side, to form a bank on the margin of the ditch. This is done by first marking off the place where the ditch is to be made, by a boy with a hoe, making a chop at every stride of the level; then with a good plow and plowman, the horse being led on the marks for the first furrow; after that running 4 or 5 other furrows as deep as possible; all the loose dirt is then removed with hoes, and the horse and plow is again used for a second plowing, and continue the process until the ditch be made the requisite depth. Some of my ditches are not more than 30 or 40 feet apart; but these are on hill-sides that are very steep. Where hill-sides are of a gradual descent, a ditch for every 30 or 40 yards, and, in some instances, 40 or 50 yards, is sufficient. But as regards the distance between the ditches, the person who locates them must exercise his judgment in that particular, and should not be too fearful of getting them too near together. When rows are to be run off for planting corn or cotton, there must be judgment exercised in deciding on which side the short rows, if it is likely there will be any, which is most always the case between the ditches, whether the situation of the land between the ditches requires that the short rows be thrown above or below a ditch; always commence running off rows parallel with one ditch or the other. Mr. Hunt, in his communication on the subject, directed that the rows should be run off parallel with each ditch, so as to throw the short rows, if any, in the centre. I think this is a bad idea, for if there should be many short rows, and there frequently are, and sometimes at some distance from where the ditches empty their water, in such cases, in a great fall of rain, those short rows would catch a grea deal of water, which would collect in a body and make its escape, forming a gully till it got to a ditch or some outlet. Ditches, after being made, must be carefully attended to and kept well cleaned out; nor should the grass and weeds be permitted to grow up and fall in them so as to obstruct the passage of water, and, in some cases, do serious damage to the land below. The cleaning out of ditches, after being well made, is but a light job. If much litter, dirt, &c. collect in them, run up and down with a plow to losen every thing that should be taken out; it is then easily removed with the hoe.

One of the difficulties in ditching, is to obtain a suitable situation to empty the ditches, to course the water out of the field or plantation. When there is a branch running through a field, that is a suitable place for that purpose; in other cases, a field that has a long hollow across it, perhaps a gully already made, that is a place to empty in; and sometimes it is best to make a ditch to empty others in; and it is best, in most cases, to commence laying off a ditch where the water is intended to be emptied, and where this ditch is long, it requires to be made more sub-

stantial, to enable it to carry the increased body of water. For this and one other reason, when I have a field to ditch, the situation of which will admit of it, I run the ditches from the highest part of the field to each side, if there is any situation that will admit of their being emptied. This plan gives a shorter and safer ditch, and by leaving a narrow space on the departure of each ditch to its side, affords a pass way for a cart, &c., for hauling.

The opinion prevails among some planters, that land will naturally improve after being well ditched, and that there will be no more washing; both of which I think are erroneous. I have yet to see the piece of land that will improve, under constant cropping, without the aid of manure; and as regards washing on our steep hill-sides, when a heavy rain falls, there will be certainly some little cross washes on certain situations; for instance, when there is a little rise or sink on the land between the ditches, either of these will hinder the gradual drain of the water that collects in the rows that cross those places, which will cause a little cross wash to the first ditch below. In all such places as these, when I sow my wheat or oats, I have corn-stalks gathered and thrown, and as the plow passes over them, make the plowman shake the dirt off his plow on them. And wheat and oats will grow in such places as well as any where else.

I do not extend the heads of my ditches out to my fences by some 8 or 10 feet, unless circumstances require it; that much is left for the convenience of a cart-way.

I do most earnestly recommend all those who intend to ditch their hill-sides, to do so before the gullies form, as after gullies are once made it requires much labor to fill them up, and then in nine cases out of ten, the ground is left lower about them than it was before any wash had taken place. All such sinks will catch the drain of water from each row that crosses them, and cause a cross wash to the ditch below. I would not, however, discourage those who wish to ditch their hill-sides that are already in gullies, but advise them to proceed forthwith, and when gullies are of much size, make a secure dam wherever a ditch crosses one—one at least safe enough to keep the water in the ditch—then fill up the gullies between the ditches with any thing that is most convenient.

I have failed, Mr. Editor, as I expected I should at the commencement of this communication, to do this subject that justice which it so much merits. I have not made the descriptive part as plain and as easy to understand as I wished to have done; the ideas given are not as connected as they should have been; but I will make no other apology than that I have done as well as my limited ability would afford. Allow me, in conclusion, to say to those who wish to ditch their hill-sides, not to wait for any more information one the subject; that one day's practice will teach them more than a half dozen communications.

I saw in the Cultivator some time back, that there was an Agricultural Society formed in Morgan county, and that they had prescribed certain premiums, to be awarded some time this year. The best sample of hill-side ditching was to receive (if I am not mistaken,) the highest premium. I then thought, and do yet consider that object one of the best selections for a prize that I have known. When that object is properly carried into effect, it will be of more benefit to the planters of this section of country, than any fat ox, horse or hog, whose owners have received their $5 for their skill in raising them.

Yours respectfully,

JOHN FARRAR.

BRYAN COUNTY, January 1, 1844.

Gentlemen—I have been a subscriber to the Cultivator for the past year, and have just forwarded to you, through the Post Master, the amount of subscription for another copy, the receipt of which you will acknowledge by sending me the first number for 1844.

How does it happen that I have never, to my recollection, seen in your paper a single paragraph in relation to Sea Island Cotton? Can it be that you have so few patrons on the seaboard, or that they send you no communications? I have waited patiently myself for such, and perhaps others have done the same, from the same motive. Our lands yield in value a large portion of our exports, and it is a matter of considerable interest to our small number at east, to give and receive information on that subject; and although I am by no means an adept in the culture of the long staple, I *might* occasionally throw out a hint which might be extended and improved upon by others more capable than myself. But to the object of this communication: We have large portions of land on the main, adjoining our salt-water rivers and inlets, such as live oak flats, &c., which produce what is termed, in our fraternity, "*Blue Cotton*," from, I presume, the blueish cast of the plant. These lands are very rich, and produce fine crops of corn, but so far as I am acquainted, there has been no remedy applied for "Blue Cotton," which they almost invariably produce. By this term we mean such cotton as comes up and grows very luxuriantly, without any fruit, reaching at times the height of 8 or 10 feet, having large leaves, with crimped edges, and of a deep lead color; so much so that a spot in the field may be recognised as far as the plant can be distinguished. At other times, depending perhaps on a very wet season, the plant, after growing several feet, and bearing well, sheds all its fruit and becomes "*blue.*"

This is a serious difficulty with our strong lands, and I hope among your many readers, some one may be able to suggest a remedy for he evil. It has been generally supposed among us, that land containing a large quantity of iron would have this effect—why, I know not; but if such is the fact, it appears to me that lime would be a good application, and it is my intention to try it. The chemical action of lime on the organic substances of which our strong low flats and swamps contain a great deal, is very considerable, and this is not only in reference to vegetable remains, but it acts with equal energy upon the dead and living animal matter. Its operation, therefore, *may* effect a change in the production of the plant. Besides, if the soil contains sulphate of iron, the iron is decomposed by the lime, which, uniting with its sulphuric acid, forms the sulphate of lime, which is commonly called gypsum, and which is universally admitted to be a great fertilizer of the soil. Now the question is, will this chemical process have the effect of changing those matters in the soil which cause our cotton to *turn blue.* Experience, of course, will be our surest guide on this subject, but it would be deeply interesting to read the views of some of your learned correspondents in relation to it.

Respectfully, &c.,

AGRICOLA.

P. S. I have been using, for some time, the plow in the cultivation of the Sea Island cotton with advantage, and I intend, this year, further to facilitate my work by the side-harrow and the cultivator. Be good enough to say, in your next number, if I can obtain the latter implement in Augusta, whose make, at what cost, and whether they will answer between beds 4½ feet apart. They ought to be made so as to be moved for a greater or less distance.

Mr. Editor—The following table, showing the vitality of seeds, I have copied from Loudon's Gardening, and as it may be of service to your agricultural readers, as well as to the venders of seeds, I send it to you for publication.

"7027. *The latest period at which the seeds most generally in demand may be expected to grow freely*, are the following:

Cabbage tribe, 4 years.

Leguminous Culinary Vegetables, 1 year.

Esculent Roots.—Beet 10 years; turnep 4; carrot 1; parsnep 1; radish 2; salsify 2; skirret 4; scorzonera 2.

Spinaceous Plants.—Spinach 4 years; white beet 10; Orache 1; purslane 2; herb patience 1.

Aliaceous Plants, 2 years.

Asparaginous Plants.—Asparagus 4 years; sea-kale 3; artichoke 3; cardoon 2; alisanders and thistles 2; rampion 2.

Acetarious Plants, in general, 2 years; lettuce 3; endive 4; burnet 6; mustard 4; taragon 4; sorrel 7; celery 10.

Pot-herbs and Garnishing Plants, in general, 2 years; but parsley will grow at 6; dill and fennel 5; chervil 6; marigold 3; borage 4.

Sweet Herbs, generally, 2 years; but rue and rosemary 3; ann hyssop 6.

Plants used in tarts, &c., generally 2 years; but the rheubarb only 1; and gourd pompion, &c. 10.

Herbaceous Fruits.—The cucumber and melon 10 or more years; love-apple, capsicum tribe and egg plant, 2.

Annual and biennial flower seeds, generally 2 years; but some grow with difficulty the second year; they are seldom kept by seedmen longer than one year.

Perennial flower seeds, the same.

Tree Seeds.—Stones 2 years; and some, as the haw, 3; but they are in general of very doubtful success the second year; acorns will scarcely grow the second year; elm, poplar, and willow seeds, not at all."—p. 1237. W. P.

EGGS.—A correspondent says—"Eggs that produce the male chicken may be distinguished from those that produce the female, by their being longer and more pointed at the ends than those of the female; which are more rounded at the ends.

"People who raise chickens for the market will do well to select those eggs which produce the male chicken to set their hens with, as the males will be larger and of more value than the females."—*Planter.*

From the American Farmer.

MARLING AND LIMING.

We subjoin a letter upon the subject of *marling*, addressed by Gov. Hammond to the Agricultural Society of the State of South Carolina. It details a series of experiments made by him in the use of *marl* on his land, in different quantities, per acre, varying from 100 to 300 bushels, and their results fairly tested and compared by other lands not marled. The results are natural, and accord precisely with our preconceived, and often expressed sentiments, in respect to the use of lime and marl. The experiments of Gov. Hammond prove, that though lime may be *bread*, it is *not bread and meat* too: that worn out lands require *animal* and *vegetable* substances as well as mineral: that *large* doses of lime or marl upon soils deprived of their organic remains, or vegetable food, by a long course of exhausting cropping, are injurious, and will impair, rather than benefit such soils for present purposes: that *small* doses are better than *large* ones, under any circumstances; and that the *frequent* or periodical application of lime, in small quantites, is the policy indicated alike by economy and nature. Lands that are rich in undecomposed vegetable matter, of themselves, or where it may be applied in large quantities, can bear, and will be benefitted by, any *reasonable* quantity of lime or marl; but in its application the party must exercise a sound, discriminating judgment, or he may do more harm than good. We will here advance an opinion which we have often attempted to impress upon our readers. It is this—that whenever they are about to improve a worn out field with either *lime* or *marl*, and it may not be convenient to apply stable or barn-yard manure, that they should prepare the ground for the reception of the calcareous matter, by previously growing thereon, and turning under, at least two crops of buckwheat, which should be so turned under just when the plants are *first beginning to bloom*. *Lime*, we consider, in some form, as being *indispensable* to every soil; but as it is far from being the only food upon which plants feed, those other kinds in which, for variety sake, they may delight, must also be provided for them.

No man is disposed to go further than we are in the *rational* praise of the wonderful effects of calcareous matter as an improver of the soil—we believe that no *permanent* improvement can be effected in an exhausted soil without it—and that by a judicious use of it and nutritive manures, that many soils may be made better than they were in their virgin state—but with all our preconceived opinions in its favor, we *cannot* get our consent to adopt the opinion, that lime alone is sufficient to restore fertility to worn out land.

And we will here seize the occasion to impress these truths upon our readers—that *twenty five bushels* per acre, of lime, for all present purposes, is better than a hundred—that upon poor, exhausted land, more never should be applied, at one time—and that these quantities should be repeated every four years, until one hundred shall have been applied; and then, that five bushels a year will be enough.

Thursday Evening, Nov. 20, 1843.

The Proceedings of the last meeting were read, and a letter from his Excellency Jas. H. Hammond was read, as follows:

Columbia, November 17, 1843.

Dear Sir—In fiulfilment of my promise made last November, I again communicate to you the results of my experiment in *Marling*. The year has been so unfavorable for cotton, and my crop has fallen so far below the promise of July, that if I had not left some unmarled acres for a test, I should, as no doubt has often been done in other experiments, have come to the conclusion that all my labor had been in vain; and that, in fact, the marl had seriously injured my land. The truth, however, is very far to the contrary, and I now think that but for the marl I should have made no crop at all.

I planted this year seven hundred acres of marled land: of which six hundred and eighty were in cotton, the remainder in pindars and potatoes, of which no accurate account was kept. The cotton turned out about as much per acre in the whole, as the average of the same land for the last ten crops. But believing this year to have been at least 20 per cent more unfavorable than an average one, I attribute that much increase to the effect of the marl.

In my last communication I stated that I had selected four acres of good mulatto land, and four others of very light sandy soil, one acre of which in each selection was left unmarled, and the others marled with one, two and three hundred bushels respectively. For the purpose of showing the difference between the most favorable and the most unfavorable seasons I have known for cotton, as well as to indicate the progressive comparative influence of the marl, I subjoin the results of the last, as well as the present year, on these expertmental acres.

Experiment No. 1—Mulatto Land—1842.

Unmarled acre,			1111 lbs seed cotton.				
100 bushels	do	816	do	dec't	265 lbs	22.8	per cent
200	do	do 1003	do	do	180	9.7	do
300	do	do 1318	do	inc'se	207	17.7	do

Same Land, 1843.

Unmarled acre,			493 lbs seed cotton.				
100 bushels	do	654	do	inc'se	161 lbs	32.6	per cent
200	do	do 759	do	do	266	53.9	do
300	do	do 841	do	do	348	70	do

As I remarked last year, the acres with one and two hundred bushels of marl are decidedly inferior in quality to the other two. The unmarled acre and that with 300 bushels, are as nearly equal as any two on the plantation. It is hardly necessary to say, that these acres lying side by side, were all planted on the same day, and cultivated in precisely the same manner.

The experimental acres of the thin light land were planted last year in corn. All the marled acres produced better than the unmarled, but I will not repeat the statement, as it does not afford an accurate comparison with the cotton crop of this year, of which the following is the result.

Experiment No. 2—very light, sandy soil—1843.

Unmarled acre,			361 lbs seed cotton.				
100 bushels	do	451	do	inc'se	90 lbs	24.9	per cent
200	do	do 384	do	do	23	6.3	do
300	do	do 173	do	dec'r	188	52.	do

The land, being very old, is bare of vegetable matter for marl to act on, to which more than the texture of the soil, inferior as it is, I attribute the failure of any great improvement from it. I make the statement however because it is valuable in many respects. It shows the danger of heavy marling on worn land without previous rest or manure. The acre with three hundred bushels has been destroyed. There is one rich spot, the bottom of a small basin in the centre of it, which produced nearly all the cotton gathered. On the rest of it the weed mostly died as soon as it came up—one hundred proves a better quantity than two hundred bushels, and perhaps a little less would have been still better on this soil—at least to begin with. All the lightest land in the fields marled with two hundred bushels was evidently injured and now requires help. I anticipated this effect from what I saw last year, and reduced the quantity to one hundred and fifty bushels on all the land then marled. I have reduced it now to one hundred bushels and shall hereafter marl at that rate. I prefer to go over it again after I have finished all, and give it what it may prove itself able to bear after resting once or thrice.

The crop of this year has satisfied me perfectly that cotton will mature at least a fortnight earlier on marled than on unmarled land.

Another unexpected effect of marl it may be worth while to state. I commenced in the spring of 1842 to put it in my stable, pretty freely, for the purpose of improving my manure. I did not think of its having any material effect on the health of the mules. But I have had but little sickness among them, and have not lost one since, while previously I lost on the average four annually, and never, in any year, less than two. I attribute this change in a great measure to the absorption of noxious gases by the marl. I am now marling as actively as heretofore, and I esteem it so beneficial that I have this summer marled a field of over two hundred acres, the average haul to which is three miles from my landing: and being tolerably fresh land that has rested this year, and was sowed in oats last year, which were not cut but grazed down after ripening, I have put on one hundred and fifty bushels.

The fields on which my experimental acres are will rest next year. I shall not therefore be able to continue my report to you. Since, however, the valuable labors of Mr. Ruffin in the State have given a decided impulse to marling, I presume that all who are in reach of marl will at least experiment for themselves; and it will be of no consequence that I should longer communicate my experience. I am very truly and respectfully your obedient servant,

J. A. Hammon.

Hon. Whitemarsh B. Searbrook.

From the Southern Planter.

SALT A PREVENTIVE OF SMUT.

Sir—In perusing the pages of your excellent journal, I find salt recommended as a fertilizer; although my experience with this mineral is very limited, still such as it is, I have concluded to give it to you.

A few years since my crop of wheat was so badly injured by the smut, that I determined I would not use it for seed, and I, therefore, purchased from a neighbor a few bushels that was clean and good. I found, however, that I had not near enough to finish my crop, and having heard that salt sowed with wheat would prevent the smut, I resolved to make the experiment.—Accordingly I took my smutty wheat and washed it, and mixed with it while it was yet wet, about a quart of salt to each half bushel, and with it finished sowing my crop.

When I harvested the crop, I found the wheat purchased of my neighbor much injured by the smut, but my salted wheat was entirely free from this disease, and so superior in quantity and quality, that I believe if I had let alone my neighbor's *clean* wheat, and sowed my whole crop of my own smutty wheat, thus prepared, I should have made one hundred bushels more than I did.

In the spring of 1842 I tried a similar experiment on a few bushels of smooth chaff spring wheat, which was much affected with the smut. I washed and mixed as above, about a quart to the half bushel, and sowed it by the side of the same wheat without this preparation. My salted wheat grew about six inches higher than the other, and yielded me twenty bushels to one seeded, whilst the other did not yield half that quantity.

Respectfully, your obedient servant,

A. Lee.

From the Farmers' Journal.

CABBAGE HEADS FROM STUMPS.

Friend Cole—I do not know all that your Boston gardeners are up to, but I do know, that if cabbage stumps of any variety are set out in the spring in good order, that one, two, three or even four good sound heads will grow on them—and this they will do year after year, until they die by accident.

They are managed in the following manner: When the upper, *narrow leaved* ones, which would bear seed, are carefully rubbed off, and likewise all the lower, *round leaved* ones, which will form heads except the number the strength of the stump and soil are capable of bringing to perfection.

At our cattle show, last week, Mr. John Drew presented several such stumps, with one to four heads of low Dutch cabbage on each, which have borne for three years. He sets them out in earth in the cellar in autumn, cuts off the heads when required for use, and places them pretty thick in the garden in spring. The labor is trifling, the cut worm gives no trouble, and the crop sure and abundant.

James Bates.

AGRICULTURAL ADDRESS.

The finest Agricultural address of the year was made by Dr. Daniel Lee, at Buffalo. We select the following extract, because it will be read with as much interest by every intelligent resident of the town as by those engaged in agriculture. After showing that plants derive thier chief nourishment from the carbonic gas and ammoniacal gas in the atmosphere, and that these gases are thrown in the atmosphere in inexhaustible quantities by the decomposition of animal and vegetable matter and by breathing, he proceeds thus:—*Louisville Jour.*

GENTLEMEN:—I have in this glass, water taken from a well near my residence in this city, such as is used by my family and others. You see it is quite clear, although I suppose it holds in solution among other earthly ingredients, a portion of lime. Every time a person breathes, he expels from his lungs carbonic acid, which, as I have told you, is the appropriate food of plants. I will now breathe into this water and see what, if any, effect will be produced. You see the water is changed to a milky whiteness.

You will recollect the question to be solved was: how to seize upon the carbonic acid expelled from organic beings, in order to change it back again into new plants and animals.—By understanding the laws of chemical affinity, I have seized upon a valuable earthy manure, lime, which robbed the soil of an indispensable element when it left it; being dissolved in rain water, in its passage from the surface of the ground through the earth to the well, from whence it was taken. On the other hand I have *petrified* in this white powder, which is the carbonate of lime, a portion of my brain, nerves, muscles, fat, bones, &c., which may be converted into wheat, corn, and potatoes in a day; or may be kept without change, a thousand years.

The peculiar value of this artificially formed carbonate of lime over the chrystalized carbonate that forms about one-eight part of the earth's crust, is this: that the vital action of the roots of plants will decompose an impalpable power like this sooner than fragments of lime rocks in the soil. Hence slaked lime is more valuable as a manure than unburned limestone. No sooner, however, is this carbonate decomposed by the action of a living growing plant, than the free lime, whose carbon has gone to build up a vegetable, takes up another, and still another portion of carbonic acid. At night, plants consume no food, or very little, but digest what they have imbibed during the day.

The chemical affinity between lime and carbonic acid accumulates vegetable food at the roots of plants during their sleep at night, and when the light of day awakens their vegetable appetite, the lime that was free at sun down has prepared for them a good breakfast, for aught we know, may be, as in this instance, a portion of a human eye, or a human heart. When, however, the lime is deprived of its carbonic acid, it is soluble, as you have seen, in water; which, sinking deep into the earth or running off from its surface, growing plants are robbed of this source of food. The only remedy for this is to apply a little lime evenly over your grass, and your cultivated fields; and to apply it often, if your wheat or grass fail to answer your just expectations. True economy in feeding plants, like the feeding of domestic animals, consists in giving them just what they will eat up clean, and no more. Much of the excess of food will be dissolved in water, and carried beyond the reach of your growing crops. Still more will escape into the air, by the combined action of heat, light, and electricity.

I have stated to you that most plants require in addition to water and carbon, a portion of nitrogen. This also comes from a gaseous substance in the atmosphere. Although nitrogen forms the largest element in the air, (79 per cent,) yet it has been pretty well settled that plants do not obtain their nitrogen by decomposing common air, but derive it from ammonia, which is furnished to the atmosphere in great abundance by a world of decomposing vegetable and animals. It is the ammonia that escapes from putrifying substances that causes their offensive smell. Now, again, comes up the practical question: how are we to collect this highly volatile gas, and transform it at the cheapest rate, into wheat, beans, cheese, and wool, of which it is an important element? Rain water has a strong affinity for ammonia; which is a compound of 14 parts of nitrogen and 3 of hydrogen. Water at 50 degrees will absorb 650 times its bulk of this vegetable food. Every rain, then, brings considerable quantities of it to the ground. It is the ammonia in snow that makes it valuable as a manure; and it is the ammonia in rain water that causes it to purify in some degree like an animal substance, when water is permitted to stand in warm weather in a close vessel above ground. The first fall of a rain after a long drought is much the richest in this gas. Being extremely volatile it escapes into the air again after a warm shower much quicker than water evaporates. What then will aid the cultivator of plants, and seize this volatile ammonia, as lime does carbonic acid, and hold it permanently about their roots, in such a shape that it will feed them all they need, and no more? For an excess of this stimulating alkali, like an excess of salt in our food, will destroy life instead of supporting it.

Common Charcoal is the cheapest, and therefore the best material to apply to cultivated fields for this purpose. It will absorb 90 times its bulk of ammonia, and will give it out slowly to the vital attraction of the roots of plants. Most of you know that charcoal will correct the taint in meat; will purify rain water in a suitable cistern, so as to render it the purest water for culinary purposes. Such charcoal should be often renewed in filtering cisterns, and when saturated with ammonia, is an extremely valuable manure. The liberal application of this well known substance to the wheat fields in France, has mainly, in connection with the use of lime, added within the last ten years 100,000,000 bushels to the annual crop of wheat grown in that kingdom. The charcoal should be sown in May, at the rate of 75 bushels per acre, well pulverised. This subject is one of vast practical importance. By studying the science of agriculture, you may grow fifty bushels of good wheat on any acre of your land, I have good reason to believe, every year, bating of course extreme casualties.

You all know that, a single kernel of wheat, will, sometimes, when its fecundity is highly stimulated, send up 20 stalks, and that each stalk will bear a head containing 100 kernels. Here is a yield of 2,000 fold. Nature then has rendered it practicable to harvest 2,000 bushels of good wheat from one bushel of seed. The most sceptical among you will not deny that 2,000 kernels have been produced from one kernel, and that the same natural causes that produce such a result in one instance, will ever operate, at all times, under like circumstances, in the same manner. Hence it is but reasonable to say that nature is quite as willing to produce 50 bushels of good wheat on an acre of ground every year, mark me, *if her laws be obeyed*, as she is to grow fifty bushels of weeds every year on the same ground.

We cannot forbear annexing the following remarks on the management of cattle, and the preservation of health:

GENTLEMEN:—I was brought up to the severe labor of cultivating a poor soil. I have sown many a ton of plaster with my own hand; and many a moonshiny night have I followed the plough, that an ox-team might escape the heat of June, in breaking up large summer fallows. I mention these personal incidents as an apology for claiming to know something of the *practice*, as well as a little of the *science* of rural economy.

Permit, then, a practical agriculturist, who has devoted the best energies of his mind for years to the study of agricultural chemistry, vegetable and animal physiology, to say to those of you who are wool-growers, that by keeping the animal warm in winter, cool in summer, and quiet throughout the year, by stimulating with the elements of wool, the organs that secrete this valuable covering of the sheep, it is practicable to clip six pounds of wool as the product from the same amount and value of raw material that now yield you but three pounds. To accomplish this important result, this physiological change in the products of this living machine, you must *quiet the action* of the lungs. These expel from the system every moment, night and day, a needless quantity of animal food, which, under more favorable and other circumstances, might have been converted into wool, tallow and muscle. Mark me. There is a positive loss, a needless throwing away of 20 to 50 per cent of the food in wintering all domestic animals, which is literally burned up by nature, in this cold climate, to keep their blood, and the whole animal, some 40 or 80 degrees warmer than the temperature of the air with which they are surrounded. It is not merely the hay, oats and corn in domestic animals, and the bread and meat in man, which are consumed like the animal oil in a lamp, to warm the system, that are lost; but, by inhaling a cold and dense atmosphere, and bringing a larger amount of oxygen gas into the lungs, and through them into the blood, than is needed, inflammations are generated, ending in consumptions, alike in man and beast. An animal is an electrical battery or machine. It is practicable, so to excite the organs that form fat in a pig, in a positive degree; and to so quiet all the other organs of the animal by a kind of negative electricity, that the animal shall transform nearly all of its food that can be converted into fat, into that well known substance. The same remarks will hold true, in a good degree, when applied to the secretion of milk in cows, and the secretion of wool in the capillary organs of the sheep. On the other hand, it is quite as easy to make a pig secrete an enormous amount of bone, and an enormous amount of gristle: to have a hide as thick as a board, a nose like a plow beam, ears like sides of sole leather, and legs like an elephant!

Of all the complicated machinery in warm-blooded animals, the action of the lungs is the most important. It governs the action of the heart and that of the digestive organs. And the action of the lungs is governed, in a good degree, by the condensation from cold, and expansion from heat of the air taken into them by respiration. The condensation and expansion ever varies the quantity of oxygen that passes thro' the lungs into the circulating blood. Hence it is, that in cold climates, and in cold seasons of the year, this excess of oxygen excites inflammatory diseases. Hence it is, that in warm climates and in warm seasons of the year, when the *minimum* of oxygen is taken into the system, less carbonic gas is expelled from the lungs, and the excess of carbon in the food, being the principal element of bile as well as fat, stimulates the liver—an important organ, and the antagonist of the lungs—to a copious and undue secretion of bile. Thus it is that the human race—and domestic animals partake of the same injuries in a less degree—are evermore afflicted with bilious diseases in summer, and inflammatory complaints in winter.

As the preservation of health is a matter that deeply concerns us all, and living, as we do, in a climate subject to sudden and extreme changes in temperature, I have thought a few remarks upon the prevention of disease, would not be unacceptable to those that I have the honor to address.

In addition to keeping the body warmly clad in winter, it is important to keep the blood well supplied with carbon, which will combine with the excess of oxygen taken into the lungs by inhaling condensed air, and thereby prevent its chemical attack upon the living tissues of the peculiarly exposed lungs. This supply of carbon in the blood can be secured by eating meat, and nutritious vegetable food, far more of which

are needed in cold than in warm weather. Consumption is the consuming, the slow combustion of the tissues of the lungs by the chemical action of oxygen gas, concentrated or condensed by cold. Hence by fleeing from our northern winters to a mild climate, where only about one-half the quantity of oxygen—it being rarified by heat—is taken into the lungs at each respiration, consumptive persons often recover. On the other hand, persons living in warm climates in summer, and indulging too freely in animal and other carbonaceous food, and inhaling a rarified atmosphere, are afflicted with an excess of carbon, or with bilious affections. They come north to a condensed oxygenous atmosphere to regain their health, and generally find it. Living sparingly in summer, and eating sub-acid fruits that flourish most in warm climates, and in warm seasons, and contain little carbon and much oxygen, is the preventive of bilious diseases."

From the Chronicle and Sentinel.

AGRICULTURAL IMPROVEMENT.

The following letter, addressed to the Editor of the "Southern Cultivator," manifests such a commendable spirit, and abounds in such sound, practical views, in relation to this important subject, that we take the responsibility, without the consent of the author, of laying it before our readers, and commending it to the attentive perusal of those farmers and planters, (and there are not a few of them in the South,) who are so wise in their own conceit, as to believe that no man can instruct them in any thing about farming.

In our intercourse with planters, the remark is frequently made, *"nobody can tell me anything about farming,"*—a remark which always excites our commiseration for its self-conceited and misguided author. With such men, the progress of improvement is hopeless, until they shall have witnessed its effects upon the farms and in the domestic economy of their neighbors—then they will break through the manacles in which their ignorance has so long shrouded them.

Plains of Dura, Ga., December 8th, 1843.

Mr. Editor:—A few days since, your paper, the "Southern Cultivator," devoted to the improvement of Southern Agriculture, fell into my hands. I was really glad to see such a work commenced at the South, believing, as I do, that such journals are not only necessary to throw light upon the subject by adding the experience of the most skilful planters to our own, but it begets a spirit of rivalship—industry is thereby encouraged, and our system of domestic economy, (if we have any,) is improved.—Without industry and economy, no farmer can succeed in business; and with it, none can fail to supply himself with all the necessaries of life. But, Mr. Editor, we have so long been accustomed to plant after the manner of our ancestors, that I fear the habit with some of us has become confirmed, notwithstanding our much diminished crops and our once fertile, but now washed and exhausted, fields, daily admonish us that some system of improvement is not only absolutely necessary, but must be adopted, or we must seek another home in the "far west." I have, however, concluded to adopt the former, and intend to try my hand in the way of improvement: I have, therefore, determined to become a subscriber to your paper, and have paid the postmaster at this place one dollar for the first volume, which will be remitted to you as soon as the numbers are received. I have been a constant reader of the Albany Cultivator for a few years, and have gathered much valuable information from it; but, upon the whole, I think it throws but little light on Southern Agriculture, as our climate, soil and productions, as well as our domestic institutions, are entirely different from those of the North. There, most of the grasses are cultivated and plowed into the soil, or converted into manure in some way: thus they have a never failing source for fertilizing their lands.

But, are we to infer from this that Georgia has no means of reclaiming her worn out soil? I think not. Bounteous Heaven has every where dispensed its blessings with an even hand. In every country and clime, where man derives his support from the cultivation of the soil, the means of rendering that soil fertile, are within the compass of his power. We are, indeed, not only behind the age, but behind the north, in developing our resources; yet, we are not without them. Let the Southern farmer but try his crab grass for green sward, and I think he will have no reason to complain for the want of the northern grasses for that purpose.

But, Mr. Editor, I did not intend, in this letter, "to argue the point," (as one of my neighbors says,) or advance opinions of my own, but to let you know I wished your paper, that I might get the opinions of the best practical farmers of the State.

Yours, respectfully,

GEO. R. HARPER.

From the Prairie Farmer.

REMEDY FOR HOLLOW HORN, &c.

BY A FARMER.

Having read in your July number an article headed "Remedy for the Hollow Horn," and finding the theory therein contained so contrary to the practice I have been used to, I concluded I would give my views on the subject. For about 30 years my father kept a dairy of from 20 to 40 cows in the city of New York. During the last ten years of the time, (say from the time I was twelve years old,) I began to observe and judge for myself. The last four years of the next ten years of my life I kept a small dairy myself; and for the last ten years I have been a farmer in this vicinity.

For the hollow horn we always used from one to two table spoonsful of spirits of turpentine, poured into the hollow on top of the head between the horns;* and cutting off enough of the end of the tail to bleed,† which may be done by turning the long hair upwards and cutting off a quarter of an inch or less. I have known some persons split the tail, (and cut out what they called the wolf in the tail, which I believe is all a phantom,) put in salt, and bind it up: all the good effect is by bleeding—therefore the less wound the better. I suppose soot and salt may be good. I know salt given plentifully to cattle to be good in Illinois. On the Atlantic coast cattle will not lick salt, though during the winter season we gave salt twice a week with their food. I never knew my father to bore the horns until he had first tried the spirits of turpentine and bleeding, and then bored the horns on the under side only; and only on the top when the holes on the under side could not be kept from closing up with matter. I have heard him say he never lost but one cow with the hollow horn, whilst his neighbors who were engaged in the same business lost many. His rule was, and my practice has been, when a cow brute was observed with a sunken eye and dry nose, (which are the sure signs of the hollow horn,) to put on the spirits of turpentine and bleed at the tail, and have had unvaried success. The greatest difficulty is in not beginning in time. Cattle that have been hard wintered are very apt to have the hollow horn in the spring. It is a common practice with me if cattle do not look well nor thrive in the spring, to use the above remedy. The signs of the hollow horn are, in addition to the sunken eye and the dry nose, the appearance (from feeling) of one or more joints of the back bone being decayed and gone—also a joint near the end of the tail, which of itself is no disease, but the effect of the hollow horn. I never saw a brute have the hollow horn but without all those symptoms, but have seen them in the first stages with only the first two.

[*In the year 1836, on the authority of an experienced farmer, we recommended spirits of turpentine not only as a cure, but as a *preventive* also of the hollow horn—and since then, from personal experience, we do know that it will effect both the one and the other. If a table spoonful of spirits of turpentine be placed in the cup or cavity in the rear of the horns once a month during winter, it will prevent the disease.

†Bleeding is doubtless good; though we have seen a cure effected by the use of the turpentine alone. But if bleeding be necessary, its effects would prove equally salutary if the blood was taken from the neck, which would prevent the disfiguring the cow by shortening of her tail.—*American Farmer.*]

From the Michigan Farmer.

IMPORTANT FACTS FOR FARMERS.

Mr. Editor—I wish to make known through your paper some facts which I think will be of some service to the farmers of Michigan.

Amasa Andrews, Esq. of this town, harvested sixty acres of wheat, this season, while it was so green and unripe, that every farmer in the neighborhood thought, and did not hesitate to declare him mad. He commenced cutting in ten days before any others had begun. The berry, when cut, was soft, and in that state known as being in the "milk." He has now threshed it; and being somewhat curious to learn the result of so novel a proceeding, I to-day went, in company with Mr. Andrews, to the mill and examined the wheat, and found it plump, with a peculiar transparency of the berry which I never before saw—which is to be attributed to the very thin coating of the bran. We weighed some, and found it weighed just sixty-three pounds to the measured bushel; and the experienced one informed me that it made *more flour* and *less bran* than any wheat he ever saw.

Now the above facts are worth knowing, from several considerations. By cutting so early no wheat is shelled and lost, and the harvesting season can be lengthened out, so as not to make it necessary to work so hard or produce a scarcity of hands; besides, the wheat is beyond a doubt better and will make more and better flour.

Yours truly,

N. B. Eldridge, M. D.

Commendable Industry.—We were handed, a few days ago, the following statement of reward of enterprise, which we take pleasure in publishing; not only because it is a remarkable product, but that others may emulate this example of industry. It is as follows:

"Two school boys, sons of Mr. —— Cook, living on the Tombigbee River, raised, on 1¾ acres of land, 5,869 pounds of cotton. They attended school five days in the week, traveling some 3½ miles morning and evening. They worked before going to and after returning from school, and on Saturdays. They are reported as having been afflicted with the chills part of the time. Their names are James and Stephen Cook."

If we were a member of the Agricultural Society, the names of these youths should be presented to the Executive Committee for a premium at its next Fair.—*Eutaw Whig.*

GREEN CORN-STALKS MAKE RICH BUTTER.

At a late meeting of the Farmers' Club in New York, Mr. Morris, of Morrisania, stated that he kept a dairy of a hundred and twenty-six cows to supply the N. York market with milk. That he feeds them on green corn—he sows his corn broadcast—and says it makes better and richer milk than any other feed he has used, and there can be no doubt that it produces more provender, by the use, than any other vegetable.—Mr. Morris' plan coincides exactly with our notion. So much saccharine matter as corn stalks yield, must make rich milk.—*Farmers' Gaz.*

From the Chronicle and Sentinel.

GREAT YIELD OF CORN.

We publish below, says the Louisville Journal, an account of the manner of cultivating an acre of corn, by George W. Williams, of Bourbon county, Kentucky, with a certificate of a committee of the Bourbon County Agricultural Society, appointed to measure the corn and the land. We like this method of doing things of this kind. To learn only that a man grew a certain amount of corn per acre is extremely unsatisfactory. It is of no use to the community and often excites suspicion of imposition.—But we should always have the manner of culture along with a well authenticat'd statement of the amount of produce and the measure of the land.

In a private letter to us, Mr. Williams states that he considered the yield of this acre a failure, on account of wind and blight, and he expects to hear of much larger crops. As to his oat crop, he says:

"I make no report of oats. It was so much blown down, that I did not think it worth while to have it measured in the way directed. My overseer, however, did measure it, and, to my astonishment, reported 49 bushels; many bushels were left on the ground."

September 27, 1843.

GENTLEMEN:—The Bourbon County Agricultural Society have appointed you to measure an acre of corn cultivated by me, with the view of forwarding the result to the Jefferson Agricultural Society, and I am required to give to you, first, a detailed account of the mode of its cultivation, describing the soil and whole treatment from the fall of 1842 to the gathering of the crop." This I proceed to do in as concise a manner as I can. The acre was inclosed about the 1st of September, 1842; is in a square, and includes land, one half of which had been exhausted by long previous cultivation in corn and other crops, and, when inclosed, was such land as, I suppose, in the common way of planting corn, might have yielded 35 or 40 bushels per acre; the other half inclosed was good hemp land, a small part of it being, in fact, too strong even for hemp. Early in September, I commenced feeding 110 hogs within the inclosure, and continued to do so until they were fatted, which was about the 10th of November. In March following, I carted from the stable green stable manure enough to cover, with a light coat, the whole of that part of the ground which had been exhausted by former cultivation; being careful to have none put on the other and better half. As soon as the frost was out of the ground, which did not occur till after the 1ts of April. I ploughed it well, harrowed and cross-ploughed it, in this way pulverizing the soil thoroughly. On the 14th of April, with a shovel plough, I laid it off into rows each way, two feet apart, and planted it, dropping two grains to the hill; I covered with a harrow, and followed the harrow with the roller. The whole after-cultivation was done with a hoe, which was tedious and required an amount of labor I had not anticipated on account of the growth of grass, timothy, and clover, and of many weeds. I gave it two hoeings, and, to have done it justice, it should have had the third. The crop was greatly injured and reduced by the occurrence of two storms of wind which swept nearly the whole to the ground, and besides many ears were entirely ruined by *blight*, the consequence of *bruises* received in *hoeing*. On the 7th day of September, I had the crop cut and put into stacks. I cut it thus early because being mostly on the ground and many rains occurring, the crop was injuring very much. My hands are today engaged in shucking it, and I will be gratified to have you measure it tomorrow.

Very respectfully, &c.,

GEO. W. WILLIAMS.

Messrs. E. CLARK & W. W. FORMAN.

[CERTIFICATE.]

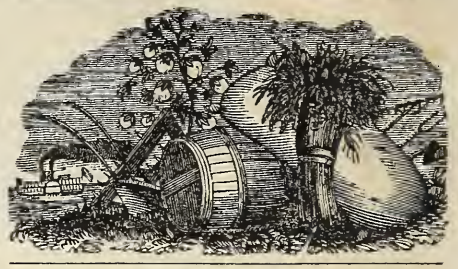
We, the subscribers, appointed by the Bourbon County Agricultural Society, to measure one acre of corn cultivated by George W. Williams, do certify that we have measured the same accurately, and there is 127 bushels, 6 gallons, 1 quart, 1 pint, and half pint, to the acre.—We were exact in the measurement of the land as well as the corn. Given under our hands this 28th of September, 1843.

EDWIN CLARK,
W. W. FORMAN.

Planters of Georgia! you especially who already "*know enough about farming*," we commend to your particular attention the facts contained in the above article. How many of you raise, as the average product of your farms per acre, one-tenth of this yield? How many of you cultivate an acre of corn upon your poor exhausted lands with less labor than Mr. Williams bestowed in the culture of this? And yet you raise fifteen to twenty bushels, while he raised one hundred and twenty-seven! nearly equal to the average production in Georgia of ten acres of land! This is no imaginary picture: every observant man knows that the average corn crop in Georgia does not equal two barrels per acre! Why is this? It is because there has been no spirit abroad in the land for improvement—it is because almost every planter in the land is foolishly striving to see how *many* acres of land he can cultivate, while little attention is paid to the system of culture or to the improvement of the soil. It is no argument against this large yield of corn that it was only accomplished upon a single acre; experiments should always be made in a small way—and an experiment on one acre serves as well to show what may be accomplished by an enlightened system of culture, as an experiment on one hundred acres—and in the event of a failure the consequences are only one-hundredth part as disastrous.

But we have another object in view, in calling attention to this article, and it is to ask—Do not these facts force the mind of every intelligent, reflecting planter, to acknowledge the important benefits to be derived from Agricultural Societies? We think so. Why not, then, form them in every county and neighborhood? Shall we grope on in poverty, ignorant of the improvements of the age, while all the world are enriching their estates, filling their purses, elevating and refining their intellects, and improving their lands, by the aid of Agricultural Societies and Clubs?

These are grave and important questions, and they deserve the grave consideration of those to whom they are propounded. Let the planters of the entire South contemplate the consequences to those who come after them, if they persist in that system of culture which has already quite exhausted one of the most fertile regions on the continent of America—let them survey in their mind's eye the squalid poverty which will be entailed on those who will be forced, from necessity, to dwell upon and cultivate] these worn-out and exhausted lands, and then let them contrast all this with the other side of the picture, a view which must be presented of the whole face of the country looking like a well cultivated garden; a bounteous plenty rewarding the labors of the husbandman, and domestic peace and quiet reigning supreme throughout the land,—all, all the results of an enlightened system of Agriculture, the immediate consequence of having in every county and neighborhood, Agricultural Societies and Clubs.



WEDNESDAY, JANUARY 10, 1844.

THE BACK VOLUME.

All new subscribers who may desire it, can obtain the first volume, neatly bound in boards, at one dollar the volume.

SEND IN YOUR LISTS.

As it is very important in regulating our edition to know what number of subscribers will probably be obtained, we beg our friends to send in their lists at the earliest possible day.

SEND US MORE SUBSCRIBERS.

However unwilling we are to trespass upon the indulgence of our readers, and to occupy our columns with matters pertaining to our own affairs, nevertheless we deem this a fit occasion, being the first number of our second volume, to add a few words to what we have previously said, to induce a zealous effort on the part of the friends of the "SOUTHERN CULTIVATOR" to extend its circulation. Of the interest which many warm friends have taken in its behalf, we have already had many flattering evidences in the shape of a long list of patrons, and to all such we should be wanting in justice to our own feelings, not to extend our most sincere and grateful acknowledgments. There, too, are others who have promised a zealous co-operation, from whom we have not yet heard, but we doubt not they are faithfully discharging their duty to themselves and their country, in their efforts to aid the extension of the circulation of an agricultural journal. We made an earnest appeal to the patrons of the first volume to go among their neighbors and friends, and invite their co-operation in furthering of our views. Many have already responded—most nobly responded—to this appeal, and we beg leave to renew it, and to include, also, those who have been recently enrolled on our list of friends for the second volume. Every man has his influence in society, and each subscriber to the "Southern Cultivator" may readily obtain one other, and many of them can obtain a hundred.

The necessity of some exertion on the part of our friends, now that our enterprise is in its infancy, is very apparent to every reflecting mind. In the first place, we are unable to publish the work unaided by the friends of agriculture, and as we have before remarked, we are quite confident that no friend of the cause de-

sires that we should go unrewarded for our efforts to promote the interests of the agriculturists of the Southern States. Again, the price of subscription is so low as to preclude the possibility of sending out traveling agents, even though they could travel among our agricultural friends free of expense. We can only hope, therefore, to obtain a general circulation for our paper, by the united and zealous efforts of the friends of the work, in their respective counties and neighborhoods. If this reasonable hope be disappointed, we have no other alternative but to abandon the enterprise; but we feel assured it will not be disappointed, and we will not, therefore, acknowledge any such word as *"fail"* in our vocabulary. Let but the friends of agriculture, and the agriculturists themselves, come up boldly to the work, and the day is not far distant when the Southern Cultivator will become to the South, what those of longer standing at the East and North have been and still are to New England and the Middle States. This is indeed promising much, yet it shall be fulfilled to the letter, if our friends, who have assured us of their aid as contributors, do not disappoint our just and reasonable expectations.

In conclusion, we beg leave to remark, that although our list is increasing daily, the number of subscribers is yet inadequate, wholly inadequate to remunerate us for our labor and expenses. In view, however, of a greatly increased patronage, we have worked off a large edition of this number of the paper, and all new subscribers may therefore certainly rely on being supplied with the present number, and the edition will be increased if circumstances require.

TO CORRESPONDENTS.

"Agricola," whom we welcome most cordially to our columns, asks, why it is that he has seen nothing in our first volume on the culture of Sea Island cotton. The answer is, doubtless, as he supposes, the Cultivator has very few patrons on the seaboard, and those few have not contributed a word on the subject, and as we were wholly ignorant of the system of culture of long staple cotton, our columns have, heretofore, contained nothing in relation to it. We however thank "Agricola" for inviting the discussion, and trust that it may elicit valuable information to the cultivators of that class of cotton.

With regard to the peculiar kind of land to which "Agricola" alludes, we suggest the propriety of first analysing the soil to ascertain its constituent parts, then by a comparison with the soil which produces the long staple cotton successfully, the defects may be readily discovered, and the corrective applied accordingly.

In reply to the inquiry contained in his postscript, we remark, that the cultivator is manufactured, in this city, by Mr. Alexander Philip, and is made stationary, or to expand to any desired width—price seven dollars.

A correspondent from Butts county, for whose frank and candid letter we thank him, takes us to task for the scantiness of our editorial remarks, and says we sometimes permit communications, containing incorrect views, to pass unnoticed.

"For instance," says he, "in the able report of the committee on cotton from the Newberry Agricultural Society, published in the Southern Cultivator, of the 25th of October, the committee say, 'the seed should then be strewed very *thick*, from three to four bushels per acre.'—Now I differ entirely from that report, in planting cotton seed thick, (unless the ground is very rough.) Cotton seed should be planted as thin as possible, to insure a stand. It would be best to have only enough stalks for a stand, and none to chop out. But as that connot be done, the nearer we approach to it the better. When cotton is planted thin, the growth is not checked, and it continues to grow. When planted thick, in sprouting, it bursts up the crust of dirt that covers it, leaves the roots exposed, and sometimes dies. If it does not die, when the hoe passes through, in chopping out, the stalks intended to be left, fall to the ground. But if there are but two or three stalks in a place, the growth is more vigorous, and the chopping out much more rapid and easy. After cotton forms the third leaf, it should be brought to a final stand as soon as possible, as it then branches better and matures earlier. As facts are worth more than arguments in planting, suggest to the chairman of that committee, Mr. Editor, to try a few rows of cotton planted thin.

"Again, in a communication from that minute observer and practical farmer, Mr. John Farrar, he comes to the conclusion, that this climate is too dry, to make as much corn per acre, as is made in more northern climates. I think Mr. F. is mistaken on that subject—at least, I hope so. On uplands, by proper manuring, and, perhaps, subsoiling, (I never used a subsoil plow,) or on rich bottom land, one hundred bushels of corn can be raised on one acre of land, and perhaps more, in the State of Georgia. The reason that I have come to this conclusion is, I raised the present year, on about seven acres of bottom land, on the Oakmulgee river, more than one hundred barrels of corn. Sickness prevented my measuring the produce of a single acre, which, if done, would have shown a large yield. The corn was planted on the 9th of May, and plowed and hoed only once. And from the seven acres thirteen large wagon loads and fourteen ox cart loads of close, slip shucked corn was gathered, besides pumpkins without number.

"I regret very much that an acre was not measured. Therefore vague calculations of the ground and quantity raised, prove nothing. It has convinced me, however, that one hundred bushels of corn per acre can be raised in this State.

"I am anxious that your Cultivator should be established on a firm and permanent footing.—The information diffused by it among the planters, will be worth more to them than all the rant about politics in all the pelitical papers in the State."

We plead guilty to the charge made against our editorial labors, and offer, in extenuation, that our arduous duties in another department of our vocation, prevented our bestowing as much attention on the Cultivator as we desired. This, however, will not be the case in future, as our arrangements are so made as to permit us to bestow more attention upon the editorial columns of the Cultivator than we have heretofore done. Another reason for not controverting the views of our contributors, was a desire, on our part, to invite discussion from others, whose practical experience would be of more value to our readers than our crude notions.—And we are gratified that in this we have succeeded so far as to draw out our correspondent, who, we hope, now that he has *"broke the ice,"* will continue to favor us with his views upon any and all subjects connected with the objects of our journal.

AGRICULTURAL PAPERS—PREPARATION OF COTTON.

In thanking our friend, Col. M'Donald, for his zealous efforts in our behalf, and the expression of his kind feelings, we beg leave to invite the attention of the reader to the subjoined extract from his letter. We concur fully with him as to the value of Agricultural Papers upon the productive industry of the country, and can but hope that the day is not far distant when their value will be more generally appreciated.

The preparation of cotton for market is a subject, astonishing as it may be in a cotton growing region, which we think is not sufficiently appreciated among our planters generally—though there are many exceptions. The truth is that too many of our planters are quite too careless in gathering and ginning it, and then by a very unwise system of economy they seem to think if they put it in bagging that will get it to the market in which it is first sold, it is all sufficient. Indeed it never seems to have occurred to this class of planters that, all cotton is bought by dealers with direct reference to the order in which it is when sold, and make their bids accordingly. As we shall devote considerable attention to this subject at the proper period for introducing it to the attention of our readers, we need not on this occasion say more than to assure every planter that, the proper care and attention to it, is always liberally rewarded by the additional price they receive for their cotton.

Eufaula, Ala., January 2, 1844.

"I should be extremely sorry to know that your work, the only one at this time in the region of the country, properly speaking, the cotton growing section, should not only be not sustained, but well supported. It only requires some exertion on the part of the farmers not only to sustain such a work, but to make it a useful and valuable part of every man's library. Next to the bible, each farmer should read and study an agricultural work, where he could learn a thousand different maxims that would apply to his every day business. He would there find out how his brother farmers do many things that he never once thought of.

In our region of country, we have prepared, the past fall, much beautiful and fine cotton.—The cotton raised in Barbour county has been selling at Eufaula, (many of the farmers not having to haul it more than ten to fifteen miles,) for 8, 9, and as high as 10 cents, and some lots have gone over 10 cents. The high prices are, no doubt, owing to two causes: the one is, that our soil is peculiarly adapted to the raising of the great southern staple; the other is, the care and attention bestowed in the preparation for market. The proper preparation of cotton for market is a subject that is too much neglected by nine-tenths of the cultivators of that valuable staple.

I made some twenty crops of cotton in a small way in my native State, Georgia, and I had been so often told in your city, and in Macon, by the purchasers, that my cotton was badly handled, that my gin was a bad one, that I determined, if possible, to prepare my cotton in a different way; that is, to make less and put it up so that when it came to be sampled, I would at least not be ashamed to stand by and see it drawn out. In a future letter I will probably give you my present system of preparing my cotton for market."

A NEW VARIETY OF CORN.

The following variety of corn, it is stated in a paragraph in the Cabinet, was brought from the Oregon Territory:

From the Farmer's Cabinet.

CALICO CORN.—The readers of the Cabinet may be pleased in hearing of an article of grain, that approaches nearer than any other in making flour and bread similar to wheat. I send a sample of the flour and two common sized ears of the corn. The hull or covering of the grain is of so many and various colors, that when ground fine, some of the particles being bolted through with the flour, may have a tendency to darken it some; but as to the color of the flour or bread, few, if any, could discover from the appearance of either, which was made from the corn, or which from the wheat, when laid by the side of each other. The bread of the corn, when mixed and prepared for baking in the same manner as wheat flour, will become light sooner than wheat; and in mixing, is more difficult; and for pies, does not stick together as well as wheat flour. In taste, a difference can be discovered. But let a person who has no knowledge of the article make use of the bread, pudding or pies, which occurred at my own table, and let him be asked of what the article was made, and he would pronounce it wheat—so near does it approach to it.

I have said enough by way of recommendation, as it will recommend itself more rapidly than seed can be procured. The object of my present remarks is more particularly to those who may become possessed of a portion of it to plant, that they may be careful to prevent it from becoming adulterated by mixing. It is not sufficient to plant a portion in the garden, and having a corn-field of other corn near by. It will mix much further than I could have believed, had I not seen it.

In raising what little I have, I planted it the 24th day of the sixth month, and gathered it the 10th inst., and my neighbor having a lot of corn near by, I purchased the privilege of topping, or cutting off the tassel, to prevent mixture. I am told, and believe, as much per acre can be raised, as of other corn; the stalks frequenly have two ears on, and the ears generally have as much on as other corn. I have observed almost every color among the grains of this corn, but I have not seen yellow, without believing it was a mixture. I have seen some lots that retained all the colors, but I had no doubt of their being much adulterated, from the hardness and shape of the grain—of their compactness on the cob, and their straight rows, which do not often occur in the genuine Calico Corn.

Please retain the two ears of corn and flour at the office of the Cabinet for inspection.

I have omitted to mention, that it ought to be gathered as soon as it is ripe, or it will swell, sprout and damage; particularly if the weather should be wet or damp. I had one and three-quarter bushels of shelled corn, weighing 72 or 73 pounds when taken to the mill, and had 30 pounds of superfine, and 20 of common flour—and 21 pounds of bran; and several millers agree in opinion, that much improvement in grinding might be made, with a little preparation. Respectfully,

A. W. TOWNSEND.

New Brighton, Pa., Oct. 30, 1843.

From the American Agriculturist.

LOTION FOR A BRUISE OR SPRAIN.

In a letter from Mrs. Susette Andrieu, a woman who, by instinct, experience and talent, is, as I am persuaded, the best nurse in these United States, I find the following recipe for sprains and bruises. My system has always been to spread such things far and wide, for the benefit of humanity and the brute creation. In every family there should be a common-place book, in which such things should be entered or pasted, for although we often hear of cures for burns, scalds, sprains, colics, &c., when these occur, we have either forgotten the materials or the proportions, or we have them not at hand. How many farmers are there who have such a thing as a set of phlemes to bleed a horse, or a bottle with the neck of it wrapped with twine, ready to administer a drench? But to the prescription for a bruise or sprain: 1 pint soft soap, 1 pint strong vinegar, 1 handful of table-salt, a table spoonful of saltpetre. I. S. S.

No man ever regretted that he kept aloof from idle companions in his youth.

The value of property destroyed by fire in the city of Boston, during the year 1843, was only $140,000.

AUGUSTA MARKET.

WEDNESDAY, P. M., January 10.

Cotton—At the close of last, and the early part of this week, our market was very quiet, and prices rather drooped. The news of an advance of ¼ to ⅜ of a cent in New York, with an active market, and very heavy sales, was communicated to only two of our heavy operators by a private letter on Sunday night, and as the Northern mail failed on Monday evening, they had two days to operate in on a flat market, during which they operated largely. On Tuesday night, however, the mail came through, and had the effect of producing a decided advance in our market, and to-day a much better feeling and more activity were manifested. The sales for the last three days have been to a considerable extent, at prices ranging from 7¾ to 9 cents—principal sales 8¼ to 8¾ cents.

Exchange– Checks on New York, Charleston and Savannah, are abundant at par. Central Bank bills are at a discount of 2 to 4 per cent. Georgia 6 per cents have not been so firm for the last few days, owing principally to the disappointment holders had been subjected to, in not receiving their interest in this city. This is, however, only a temporary depression, and the slight deduction which has been submitted to in the few sales that have taken place, will be instantly regained when the Governor completes an arrangement for paying the interest in this city.

CONTENTS OF THIS NUMBER.

	PAGE.
Agricultural Address, extract from Dr. Lee's	4
" improvement	5
" papers	7
Bruise or Sprain, lotion for	8
Butter, green corn stalks make rich	5
Cabbage, heads from stumps	3
Corn, great yield of	6
" a new variety of	8
Cotton, blue	2
" preparation of	7
Ditching, hill-side	1
Eggs, selection of	2
Farmers, important facts for	5
Hollow Horn, remedy for	5
Industry, commendable	5
Marling and Liming	3
Seed, vitality of	2
To Correspondents	7
Wheat, Salt a preventive of Smut in	3

GARDEN AND FIELD SEED.

A GENERAL assortment of fresh and genuine GARDEN and FIELD SEED, among which are the following:

Red and White Clover,
Blue and Green Grass,
Rye and Orchard do.,
Timothy and Herds do.,
Millet and Lucerne do.,
Seed Corn of every valuable variety,
Seed Wheat,
Buckwheat and Potato Oats,

Kept constantly on hand by the subscriber, all of which are offered for sale at very moderate prices. All orders, by mail or otherwise, executed with neatness and despatch.

WM. HAINES, JR.,
No. 232 Broad street, Augusta, Ga.
August 30. 18-tf

AUGUSTA PRICES CURRENT.

BAGGING, Hemp	yd.	16	@	20
Tow	"	15	@	18
Gunny	"	18½	@	19
BALE ROPE	lb.	6	@	10
BACON, Hog Round	"	5	@	6½
Hams	"	8	@	10
Shoulders	"	4	@	7
Sides	"	5	@	8
COFFEE, Green prime Cuba	"	9	@	10
Ordinary to Good	"	7	@	9
St. Domingo	"	7	@	9
Rio	"	9	@	10
Laguira	"	9	@	10
Porto Rico	"	9	@	10
Java	"	11	@	14
CORN	bush.	33	@	40
FLOUR, Canal	bbl.	6 00	@	6 50
Baltimore	"	none.		
Western	"	none.		
Country	"	4 00	@	5 50
FEATHERS	lb.	30	@	37½
IRON, Russia	cwt.	4 50	@	5 00
Swedes, assorted	"	4 50	@	5 00
Hoop	"	7 00	@	8 00
Sheet	"	7 00	@	8 00
Nail Rods	"	7 00	@	8 00
LEATHER, Sole	lb.	23	@	28
Upper	side	1 50	@	2 00
Calf Skins	doz.	18 00	@	36 00
MOLASSES, N. Orleans	gal.	31	@	35
Havana	"	24	@	30
NAILS	lb.	4¾	@	6
OATS	bush.	37½	@	50
PEAS	"	40	@	50
SUGAR, New Orleans	lb.	6	@	9
Havana, white	"	11	@	12½
" brown	"	7	@	8
Muscovado	"	7	@	9
St. Croix	"	8	@	11
Porto Rico	"	7	@	9
Lump	"	14	@	16
Loaf	"	15	@	20
Double Refined	"	12	@	13
SALT, Liverpool ground	bush.	45	@	50
" "	sack	1 75	@	2 00
STEEL, German	lb.	15	@	16
Blistered	"	8	@	12½
TWINE	"	20	@	25
TEA, Behea	"	50	@	75
Souchong	"	60	@	75
Hyson	"	80	@	1 25
Gunpowder	"	1 00	@	1 25

TURNEP SEED.

A SUPPLY of the following varieties of fresh TURNEP SEED just received, viz:

Yellow Sweedish or Ruta Baga, very fine for stock,

Large Globe Turnep, } Fine
" White Flat do. } for
" Hanover or White Ruta Baga do } table
" Norfolk do. } use.

For sale in quantities to suit purchasers, by
Aug. 30 18-tf WM. HAINES, JR.

THE SOUTHERN CULTIVATOR

IS PUBLISHED BY

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And will be issued every other Wednesday.

TERMS.

1 copy one year		$ 1 00
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25 "	"	20 00
100 "	"	75 00

The CASH SYSTEM will be rigidly adhered to, and in no case will the paper be sent unless the money accompanies the order.

ADVERTISEMENTS pertaining to agriculture will be inserted for ONE DOLLAR for every square of TWELVE lines, or less, for the first insertion, and SEVENTY-FIVE CENTS per square for each continuance.

☞ POST MASTERS are authorized to receive and forward money free of postage.

☞ ALL COMMUNICATIONS MUST BE POST PAID

☞ *All subscriptions to commence with the volume.*

SOUTHERN CULTIVATOR.

VOL. II. AUGUSTA, GA., JANUARY 24, 1844. No. 2.

ADDRESS

Delivered before the Hancock Planters' Club, by ELI H. BAXTER, ESQ., *Nov.* 3, 1843.

Let not the friends of good order be startled at declaration that I am, in feeling and principle, an agrarian! Not of that class of agrarians who contributed so much to bring about the decline and ultimate fall of the Roman Empire; not of that class who have been so prominent in warring upon the institutions of society, who, in their fierce zeal to level, would place the torch to the rich man's dwelling, and distribute among the idle and dissolute, the hard earnings of industry and economy—no; I mean an agrarian as its derivation imports—one devoted to the improvement and cultivation of the soil; one who is desirous of elevating, in the estimation of man, agriculture as one of the most honorable and useful pursuits.

To the most careless observer the necessity has become imperative, the conclusion irresistible—we must revolutionize our system of agriculture, we must improve our lands, or we must abandon our homes.

A tract of country upon which Providence has bestowed, with a profuse hand, his choicest blessings, has, by a most destructive system of culture, almost become, in appearance, a barren waste. At every point the eye meets the evacuated and dilapidated mansion—worn out and exhausted plantations. Fields that once teemed with luxuriant crops, rewarding abundantly the labors of their proprietors, are disfigured with gaping hill-sides, chequered with gullies, coated with the broom straw and pine, the sure indices of barrenness and exhaustion—all exhibiting a dreary desolation. Heretofore we have contemplated the gradual and certain deterioration of our lands with a careless indifference. Cheap and apparently inexhaustable supplies of rich land lay upon our borders. So even as our plantations, from exhaustion, ceased to reward our labors, we sought relief by removing to the rich lands of the southwest. But the inducements to emigration have ceased; this door of relief is closed; the choice lands in desirable situations are all occupied; their prices have become high, and there is now no alternative, but in expatriation, or remain and be content with a lean and scanty subsistence, or improve our lands.

In considering the subject of agricultural improvement, with a view to offer something new for its encouragement and improvement, I find every point has been occupied by Buel, Ruffin, Garnett, and a multitude of others.—They who follow those distinguished benefactors of mankind, can only repeat and urge the adoption of measures that have been repeatedly recommended by them. This consideration must not discourage us; we must have the fortitude to recommend ten thousand things that fall stillborn from the lips; we must subject ourselves to the mortification of making suggestions that will be received by many as contemptible and puerile. If Columbus could have been discouraged from his great purpose by the sneers and ridicule of his cotemporaries, the American Continent would still have been a howling wilderness. If the Christian disciple and missionary had abandoned the sacred desk, and ceased to preach the doctrines of the cross, because genius and eloquence had long since exhausted the argument, in convincing and persuading man to flee from the wrath to come, the sun of righteousness would long since have set, and the civilized world would have been enveloped by the dark clouds of superstition and bigotry. A spirit of improvement is developing itself, and attachment for our homes is increasing. To increase and encourage this spirit, and strengthen that attachment, should be the object of every friend of agriculture. To give a successful impulse to this spirit of improvement, it is important, indispensibly necessary, that we should be impressed with the truth of the proposition, that we occupy the choicest portion of country lying between the St. Lawrince and the Sabine. So long as we consider that other sections of country possess more natural advantages than our own, so long we shall continue restless and dissatisfied. This feeling of dissatisfaction is incompatible with a spirit of improvement. Men will not bestow much time and attention in the improvement and preservation of lands that they expect soon to abandon. Anxiety to move is his predominant feeling, and during this feverish impatience, he makes no improvement. To clear up, exhaust and turn out, field after field, until the whole plantation becomes impoverished and unproductive, has been the general system of agriculture in Georgia. Convince a man that his lands are valuable and desirable, and he will immediately set about their improvement and preservation. To accomplish this, we must compare and contrast. Let us then compare and contrast the advantages of the middle part of Georgia, worn out and exhausted as it is, with other sections of the United States.

My opportunities of forming a correct opinion of the relative advantages of the different sections of our country, have not been limited. Hearing of the great fertility of the lands south and southwest, and of their extraordinary productions, I caught the spirit of the times, and became impatient to see and examine for myself, those sections of country most prominent in the public eye for their fertility and production. I have seen the fine table lands of Alabama, Mississippi and Florida; the rich grain lands of Western Georgia; the rich alluvials of the Mississippi and Red rivers, and the richest of all lands that lie within the cotton region, the lands in southwestern Georgia; yet, after considering all their advantages, I esteem the lands lying in the middle part of Georgia, between the strata of rotten limestone on the south, and the line separating the cotton growing part of the state from the grain, as possessing more advantages than any of them. Fertility, climate, health, water and markets, are the subjects to which the considerate and intelligent agriculturist directs his attention, in determining upon the relative advantages of countries. A hurried parallel of them will exhibit our great advantages.

Fertility is the only advantage the most favored portions of the cotton region possess over the middle part of Georgia, and this advantage is confined to exceedingly small portions or tracts of land. Take, for instance, all the rich lands of Decatur, Early, Baker and Lee, and consolidate them, and they would not make a district nine miles square. Nine-tenths of the residue of the lands in these counties are poor, and the others are not surpassing in fertility the good lands of Hancock. These very rich spots in the cotton region are but painted sepulchres, exhibiting an attractive exterior, but within full of corruption and putrefaction—these rich spots are full of disease and death. The white families that do not retreat to healthier points, are never without the badges of mourning.—Their children that survive infancy, are delicate, sickly, and ricketty from the cradle to the grave. In these rich lands, the congestive and bilious fevers are raging from June to November. Those who reside upon them, spend their summers and falls in languishing upon sick beds, and when well, in watching by the bedsides of their sick and dieing families and friends. The industrious inhabitants of these rich lands can have an abundance of the good things of life, but they have no taste or appetite for their enjoyment—to the sick, the choicest delicacies are the most loathsome. What is life without health?—a miserable existence. Who can calculate the cost of so much sickness, anxiety, midnight watchings, and mental agonies for the loss of departed relatives. Is there not enough of sorrow and trouble in these low grounds, without increasing them by going to breathe the putrid atmosphere of those grave yards? How many of our acquaintances, who have settled upon these lands, have survived their deadly miasmas? Good water, one of the greatest blessing to man, upon these rich lands is scarce; what is found, is warm and unpalatable. With us, fountains of pure water gush from every hill-side; a temperature pleasant at all seasons, comparatively exempt from the ravages of the autumnal diseases of the south, and the inflammatory afflictions of the more northern latitudes. We can take the noon day sun, and breathe the night air of autumn, without the fear of those fatal consequences attending such exposure in southern latitudes; and we have a soil which, if restored to its virgin fertility, would quite equal their productions in the great staple of the south. At no point of the cotton region does the cotton plant do better than upon the fresh or manured lands of this part of Georgia. In 1842, James P. Knowles, a planter in Hancock, gathered thirteen bags of cotton to the hand, and made a plenty of corn and other provisions. Can Red river, Florida or Southwestern Georgia, do better than this? The difference in the productions of the two locations is comparatively trifling. If the Mississippi planter can average his seven bags of cotton to the hand, we can average five. Deduct from this difference the loss which the southern Planter sustains in slave property as compared with us, and we have the highest nett profit.

From observation and experience it has been ascertained, that the profit here upon slave property, by natural increase, varies from five to ten per cent annually, whilst the southern planter loses that much by death and physician's bills. It may be asked, if the productions of the two sections of country are so near equal, how is it that we find such a difference in the value of estates. It is easily and satisfactorily explained. It is mainly to be attributed to inheritance, and the too partial beneficence of the federal government A large proportion of the estates we find south of us, have been carried from this State, and the States north of us.—Here the farmer has from six to twelve heirs; the planters of the southwest have but few heirs,

the diseases of the climate most generally reduce them to one or two. The federal government has greatly increased these fortunes by pre-emption rights and other annuities.

If the relative advantages of the two sections have been correctly delineated, what should be the difference in the products to make them equal. To an intelligent and philosophic mind, no production that the laboror could gather after making, should tempt him to exchange situations. Before we conclude to fix our homes upon these rich lands, we should think of the beautiful couplet of Pope—

"Man wants but little here below,
Nor wants that little long."

Human life, when not abbreviated by disease, is but a span; to afflict that short period with the sufferings, mental and corporeal, incident to a sickly climate, is at best but poor philosophy. Here we can have health, long life, and lands, worn out and exhausted as they are, enriching their proprietors who are industrious and economical. The most of you have read an address lately delivered by the great New England statesman, at an agricultural celebration in Western New York. The occasion, the place, and the time for preparation, prompted and enabled that distinguished man to throw into his address all the powers of his highly gifted mind. Bis great object in that address, seems to have been to exhibit the great advantages which Western New York possessed over the planting portions of the world. The repeated bursts of applause from his audience tell, in strong terms, how successful he was in accomplishing that object.

I have considered all his reasons and positions, and they but confirm me in the opinion, that our portion of the State possesses, in a much more eminent degree than Western New York, all the elements conducive to the wealth and happiness of man. His conclusions are correct, as applicable to countries exclusively adapted to planting and grain growing, but totally inapplicable to us. His contrasts and parallels, as he has carried them out, not only exhibit our advantage over plantation States, but over grain States. He says, that "he planter makes but one product for sale and buys twenty; that consequently, a failure in the crop, or a serious fall in the price, is attended with the most disastrous consequences. Having to buy every thing, if he fails in a crop he is ruined; if his product declines ten per cent in price, it affects to that extent his whole annual income. Western New York is independent of these vicissitudes, because she produces every variety of production, both vegetable and animal, necessary to the comfort of man. It is this variety which constitutes the great advantage of the farmer of Western New York. If his crops fail, and prices fall, still he is independent; his family is fed and clothed out of his own productions."

Every one who hears me, knows that we possess, in a much more eminent degree than the farmer of New York, all the elements of independence. What, grain, vegetable, or animal, that they can raise in Western New York, that we cannot raise here? If their tables are supplied from the products of their own soil, so are ours; if their families are clothed with fabrics made from their own fleeces, so are ours. If we cannot raise as much wheat and corn per acre as the farmer of New York, we can raise an abundance for our own consumption, and make heavy crops of cotton, that control and regulate the trade and commerce of the world. If they have health and good water, so have we. The mildness of our climate makes our productions quite equivalent to theirs in sustaining animal life. In New York, their first fruits ripen in June; here we have a great variety of fruits ripening from April to November. The orange and pine apple, the only fruits of the tropics that are desirable, are brought to our doors, at such prices as the poorest farmer can buy them. Notwithstanding we export large quantities of the great southern staple; notwithstanding we direct all our energies to its production, reserving our best lands for it, yet corn and wheat are as cheap here as they are in New York. If our old worn out soils can do so much under our wretched system of culture, what could they not do under the improved system of the north? If we can make so much grain, and yet make so much cotton, what could we not do if all our labor was directed to the making of grain? Here we can be farmers or planters, as taste or interest may dictate. Indeed, our lot has been cast in pleasant places. We can have the independence of the farmer, and enjoy the superfluities and luxuries of the planter of the tropics.

The same distinguished gentleman, to please his audience, drew a parallel between the condition of society in the planting and farming communities. He inquires, "What is society in the plantation? There is no society. There is a capitalist, and there is a labor of a particular description. But as a society, a society of intelligent and free spirits, there is none, none, none, and there never can be." 'Tis true; the parallel is drawn between the West Indian planter and Western New York. But we are planters, and we have labor of a particular description—yea, we have slave labor—yet our society is free, intelligent, and virtuous. Our latitude and temperature is particularly favorable to the development of the highest grade of physical and intellectual powers. The institution of slavery has *not* impaired the spirit of liberty. Upon this subject the views of the celebrated British statesman are beautiful, and true as beautiful—"Where there is slavery, those who are free are by far the most proud and jealous of their freedom. Freedom is to them, not *only* an enjoyment, but a kind of rank and privilege. Not seeing there, that freedom as in countries where it is a common blessing, and as broad and *general* as the air, may be united with much abject toil, with great misery, with all the exterior of servility; liberty looks among them like something that is more noble and liberal. Here the people of the Southern States are much more strongly, and with a higher and more stuborn spirit, attached to liberty than those of the North. One of the great obstacles to agricultural improvement, is the low estimate put upon it as a pursuit by all classes of society. The cultivation of the soil is considered a pursuit unworthy of the attention of the scholar and gentleman. The successful planter educates his more gifted sons for one of the learned professions, whilst he destines his less intellectual for the farm."

It has become common for the agricultural class to look up to the merchant and the learned professions as a higher order of society. The young man of genius and ambition, looks upon the cultivation of the soil as a grave that is to keep in perpetual night all his high hopes of distinction. This feeling in society is radically wrong, and has been mainly superinduced by the humble and unpretending character of those engaged in it. The capacity of the intelligent planter to serve the country is overlooked, and his claims for office superseded by the babling politician of the village and city. To engage in agriculture is a voluntary ostracism. This subject has attracted the attention of every one who has taken any interest in the cause of agricultural improvement. It is a subject of regret and lamentation in every agricultural address; yet it is a prejudice so deeply rooted in society, that no remedy has as yet been suggested that promises to eradicate it. The intelligence of the people has been appealed to; agriculture has been exhibited with all the attractions that genius and fancy could throw around it; education of the agricultural classes has been recommended and adopted without effect. Still the young men of genius, promise and education, all throw themselves into the learned professions; still the cultivators of the soil are content to be considered a menial class in society, subservient to the merchant, mechanic and professional man; having little or no participation in the offices of honor and profit which they confer. Before we can make much progress in the great work we have embarked in, public opinion upon this subject must be revolutionized; this disgraceful prejudice must be hooted from society. To effect that revolution, the remedy is easy, simple and effectual, and you have it in your own hands. The agricultural class constitutes six-eights of our population:—you must make your numbers and your influence tell at the ballot box. Agriculture sustains all the great interests of every country. She feeds the people, pays all the expenses of the government, in peace and war. She should not be content with casting her vote for those who are to rule over it, but she should have agents from her own body to participate in the administration of the government. Let her claim her ratio of representatives in the State and Federal legislature—it is her legitimate and constitutional right. Organize and unite, and you cannot fail to enforce this right. Teach the young aspirant after fame and distinction, to look to you for the gratification of his wishes; make agriculture the theatre upon which genius and talents are to exhibit for popular applause, and you will soon eradicate from the public mind that contemptible prejudice that has been so long operating so injuriously upon this great interest. The imposition of taxes is considered one of the most important duties of government, and hence it has become a fundamental principle in free governments, that those who pay the taxes should impose and regulate them. It was the disregard of this salutary principle by the mother country, that excited her colonies to revolution. The mischiefs to the public interest, growing out of a disregard of this principle, is too apparent in the legislation of many of the States. The debts of many of them have become so large as to startle the patriot and statesman. Some are so distressed with this debt, as to seek relief in the discreditable, disgraceful remedy of repudiation. If the farmer and planter had have had the control of the public councils, those ruinous and reckless projects that have created this indebtedness, never would have been adopted. It is only the cultivator of the soil that knows any thing of the toil necessary to make a dollar; and these are the men who, in our legislative assemblies, are for holding close the purse-strings of the State. If the journals of the legislatures whose actions have been characterized by such wasteful expenditure of the public money, and abuse of public credit, could be examined, I feel assured it would be found that they are controlled by men belonging to that class known in political economy as the unproductive.

Though all admit the great importance of this branch of the public interest, yet look to your own legislature and see how it is neglected and disregarded. You will find upon its journals, a long catalogue of standing committees upon various subjects connected with the public interest, yet you will find no standing committees upon agriculture. Long and elaborate reports are made upon the contemptible humbugs of the day, yet not a breath is spent upon this all important interest. In eighteen hundred and ....., a time of unprecedented gloom and distress to the planters of this State, the legislature passed a law offering an encouraging stimulant to the cultnre of silk. At that juncture it was a political measure that would have been creditable to such geniuses as Pitt and Clinton. The great staple of the State, from a concurrence of causes, was so depressed as not to pay the cost of production; and there was no prospect of improvement, as the low prices proceeded from over production. The country being deeply in debt, distress was predicted by every tongue, and time has verified the truth of their anticipations. Expecting no relief from the culture of cotton, the people began to direct their attention to the culture of silk. Many made considerable investments; all believed it would be profitable; yet no adequate and persevering effort was made. At this juncture, the legislature passed a law offering a high premi-

um upon silk culture. Many embarked into the business, stimulated by the public bounty. At the next session of the legislature, the law was repealed, and all that had embarked in it, in discouragement, abandoned it. Why the friends of agriculture did not sustain this measure, is a circumstance that has always excited my surprise; it is a fact, however, that forcibly illustrates the necessity of this great interest being more efficiently represented in the halls of legislation. If the silk culture can be made profitable in this State, what a loss has its citizens sustained by a discontinuance of the bounty.

Two years more would have attested the question. If unsuccessful, the bounty would have cost the State but little; if successful, the people could have paid millions. The exhausted hill-side, and the pine barren, would have been covered with the mulberry, and we might have been realizing from its culture as much as our fathers did from the culture of the cotton plant.

As a measure of advancing this branch of industry, the encouragement of agricultural societies, fairs, the distribution of premiums, and patronage of agricultural papers, cannot be too strongly recommended. Every citizen who feels an interest for the welfare of society, without regard to his pursuit, should enroll his name as a member of some agricultural society. If a mechanic, you have an interest in the great work. If the farmer makes good crops, you will get more work, better paid, and provisions cheaper. The same argument applies to the merchant. We want the influence of your names, and presence, and purses. These annual celebrations are fit occasions to beat up for volunteers in this great work, and we most respectfully invite one and all to come and go along with us in this great work of benevolence and humanity. It is in truth a work of humanity and benevolence! It will not only increase our means of clothing and feeding the poor, but agriculture makes employment abundant and profitable, and where there is plenty of employment, there are no poor. The benefits of these fairs must be apparent to all. Who can look upon these fine exhibitions of stock without resolving to make an effort to improve his swine, cattle or horses? Who can look upon the improved implements of husbandry without its suggesting to his mind something that may be turned out to profit. Recollect, that one of the great improvements to the cotton gin, the brush wheel, without which it never could have been instrumental in bringing about that revolution in commerce which has so distinguished the seventeenth and eighteenth centuries, was suggested to the mind of a lady, by the exhibition of the model by its immortal inventor.—They not only create a spirit of emulation between farmers, but between ladies. The splendid exhibitions of the domestic fabrics that surround us, show that the ladies are taking an interest in this great work; they give us their presence and smiles, and when woman smiles, success universally crowns the efforts of man, no matter how perilous the enterprize. Perhaps, too, they may be instrumental in substituting the old fashioned and too much neglected music of the spinning wheel, for the contemptible and too common thumbing upon the piano forte. I consider, however, the distribution of premiums as decidedly the most efficient in giving effect to agricultural improvement. It is now no experiment; its efficacy has been amply attested in Europe and this country. Scotland has quintupled her products. In every country, climate and soil, the agricultural products have been increased to an incredible extent, where this artificial stimulant has been applied. Here we want legislative aid, and you will be recreant to this great interest if you do not get it. We not only want premiums for the best stock, the best implement, and the best domestic fabrics, but we want premiums, and high premiums too, for the best ditched plantation, the best crop of wheat, corn and cotton. It is upon the improvement of our lands we wish to see all the intelligence of the agricultural class directed. There is no want of knowledge in the cultivation of our soil with our farmers; but they are ignorant as to the best means of making and applying manures. It is here we want the light of science. She has snatched the thunderbolt of Heaven and placed it powerless at our feet; she has made safe highways through the "pathless ocean;" she has annihilated time and distance; she can and will, in due time, make discoveries as wonderful and beneficent for this great interest; she has already discovered, in many places in the bosom of the earth, inexhaustible supplies of manures; she is still at work, and perhaps it is already accomplished by the discoveries of Jauffret. By this discovery we can convert all vegatable matter, in a short period of time, into rich manure. If his process succeeds, these old plantations of ours will soon teem with crops as luxurient as when in their original fertility. We want gullies filled up and leveled, and plantations made rich; we want high premiums to stimulate farmers to make efforts commensurate with these great objects. Societies are too poor—the State must do it.

"One of the most remarkable features of modern times is, the combination of large numbers of individuals, representing the whole intelligence of nations, for the express purpose of advancing science, by their united efforts of learning its progress and of communicating new discoveries." It is to this circumstance that we must attribute the accelerated progress men make in modern times in the arts and sciences. We want legislative assistance to accelerate our improvement in this great interest. $25,000 to be given by the State annually in the way of premiums, would be attended with the most beneficial effects. What substantial objection can be urged to a mere regulated system of premiums furnished by the State? For the State to patronize one branch of industry at the expense of another, is unjust, and ought not to be tolerated; but this reason does not apply to the encouragement of agriculture. All classes and pursuits participate equally in benefits conferred upon it. "Speed the plow," and you will give a corresponding animation to the business of the mechanic, merchant and manufacturer.

A distinguished ethical writer of modern times, has well remarked, that the final view of all rational politics, is to produce the greatest quantity of happiness in a given tract of country. The richest thought and glory of nations, the topics which history celebrates, and which alone almost engage the praises and possess the admiration of mankind, have no value farther than as they contribute to this end. When they interfere with it, they are evils, and not the less real for the splendor that surrounds them. The happiness of a people is made up of the happiness of single persons; and the quantity of happiness can only be augmented by increasing the number of the recipients.

That it may and ought to be assumed in all political deliberations, that a larger portion of happiness is enjoyed among ten persons possessing the means of healthy subsistence, than can be produced by five persons under any advantage of power, affluence and luxury; that consequently the decay of population is the greatest evil that a State can suffer, and the improvement of it the object which ought, in all countries, to be aimed at in preference to every other political purpose whatsoever. Here the duty of the politician is clearly and distinctly laid down—increase population in order to augment human happiness. The population of every country depends upon its productions.—The district of country that produces fifty bushels of corn to the acre, will sustain five times the number of inhabitants that a district will that produces but ten. Multiply, subtract and divide, and see what a difference in the sum of human happiness is to be carried to the credit of that government which, by a system of policy, quintuples her productions and her population.

To be continued.

Great Yield of Wheat.—Mr. T. C. Peters, in a letter to the "New Genesee Farmer," says:—

The largest yield of wheat that I have heard of this year, was in Alexander, Genesee county, N. Y. Mr. James Lewis, of that town, raised from 2 acres and 70 rods of ground, 140 bushels, clean for seed, and 8½ bushels shrunk wheat; 60 pounds to the bushel. This is a trifle over 60 bushels and 2 pecks to the acre. The wheat was thrashed and accurately measured. That there might be no mistake, I requested a friend to procure from Mr. Lewis a statement of the whole of his crop, method of cultivation, &c. I will remark, that I am personally acquainted with him, and that he is a man of strict integrity and veracity.

The whole field in wheat was 17 acres and 71 rods; principally bottom lands on the Tonawanda Creek, and of course alluvial soil. The previous crop was corn and spring wheat; no manure applied to present or previous crops.

"The ground was "summer fallowed," plowed twice in the season, and dragged three times. It was sown from the 5th to the 10th of September, broadcast, one bushel and a half to the acre. The seed was the "Red Chaff Yellow Flint." It was harvested from the 1st to 6th of August, 1843. The wheat was thrashed, and accurately measured. The whole product was 677 bushels clean for seed, and 70½ bushels shrunk; equal to 42¾ bushels per acre.

The above 2 acres and 70 rods were taken in a body, from a portion of the field.

Here we see, that if the soil be in a proper condition, it will produce 60 bushels of wheat; because it has been done in our midst. There is no mystery about it.

Valuable Cows.—At the meeting of the Agricultural Society of New Castle County, Delaware, in September last, Mr. Holcomb exhibited 8 beautiful native Devons, among them the celebrated Cow "The Lady." The result of twelve weeks' trial with this cow, gave 174 pounds 12 ounces of butter, averaging 14 lbs. 9 oz. per week—the highest product in any one week being 19 lbs., and the lowest 12½ pounds. To Mr. Holcomb for this Cow, the committee unanimously awarded the first premium.

Her feed the first part of the time was hay, and dry oat and corn meal mixed—subsequently this was changed to slop: two buckets a day was regularly given her, containing about two quarts of corn meal, and as much wheat bran, mixed in a bucket of warm or tepid water, with a little salt. The week of her great trial, in June, she was fed for about ten days on three gallons of meal a day, at three feeds, mixed as above. She had the run of a good pasture, and she was also, for a time, fed on green oats, and again with corn fodder that had been sown broadcast.

The Weeeling Times gives an account of a cow, the property of Dr. H. W. Chapline, of Ohio county, Va., which was milked three times a day, and yielded in the months of May and June, for 16 days, upwards of 34½ quarts of milk! and during two weeks that a record was kept of the amount of butter manufactured from the milk of the same cow, showed a yield of 29 pounds, an average of 14½ pounds a week.—These facts are substantiated, the Gazette says, by the affidavit of an individual whose word alone would gain credence for more extraordinary statements.

Who can beat it?—The Little Rock Gazette of the 27th ult., says that on the plantation of Mr. R. H. Douglass, in Arkansas county, one of his boys gathered 601 pounds of neat cotton, (white and clean as usual,) in one day—and that another boy belonging to the same gentleman picked 649 pounds, (not so clean, however,) in a day, making together 1250 lbs. On another day the same boys picked 1042 pounds.

From the A[illegible]y Cultivator.

THE IMPROVED [illegible]TURE OF COTTON.

Messrs. Gaylord & [illegible]ucker—Entertaining the profoundest respect and the kindest feelings towards the opinions and practices of those planters who are greatly my seniors in age and in agricultural experience, I propose now, in this third paper, to engage in discussing "the principles and philosophy of this improvement in the culture of Cotton." I will first remark, directly, gentlemen, what I have intimated thro'out this correspondence—that in conducting these experiments, and in advocating the claims of this improvement, (the leading and meritorious features of which belong to your invaluable Cultivator,) I have had no ambition to gratify, which is not common to the lover of science and agricultural improvement; nor have I any interests to subserve thereby, which may not be the privilege of every planter in the country, however humble his pretensions or ability. Yet, admonished as I have been, by the precipitate and unmeasured tirade of vituperation and spleen, which my first paper excited among the corps editorial of the country, and others of the "skinning gentry," I have not ventured upon this most delicate position, though long promised, without again revising carefully and practically, the principles and ability of this system.

In my first paper it will be recollected, I stated the grand object which this system of improved culture proposes to accomplish for the planting interest of the country, and I also gave there a fair and impartial, and a most satisfactory expose of that system, (if such it may be styled,) by which the cotton plant is at present grown. In my second number, I gave in detail, in an equally plain and simple manner, the *modus operandi* by which my experiments were conducted; this was no second hand report, or say-so of another person, but in part the work of my own hands, and the entire management under my immediate supervision. In this paper, I propose giving *the why and the wherefore* for all this—at least, in my humble opinion; and to point out the *inconsistent*, the *reckless* and *grassy* policy of the present practices of the country, as compared with the *systematic*, *economical* and *philosophic* policy of this improvement.

It is my purpose, gentlemen, first to give you a correct sketch of the botanic characteristics of the cotton plant, as we meet with it under the circumstance of its most favorable culture. I do not offer this in the spirit of ostentation, to appear learned from the technicals used, (the necessary peculiarity of every science.) My object is simply to call attention to a subject—too much neglected by planters—about which the books are carelessly in error; and a proper knowledge of which, in my opinion, tends greatly to indicate the best or right mode of culture.

The botanic name then, of the plant we cultivate, is *Gossypium herbaceum;* we find it in the fifteenth class of the Linnean system, (*Monadelphia,*) and in the thirteenth order, (*Polyandria*) The first leaves that make their appearance after the cotyledons, three to six are *ovate*, and indicate certainly the sucker or branch limbs, that will first put out from the stalk. After these, we have the cotton leaf proper, *three to five lobed*, and mercronate, with one gland upon the *mid-rib* beneath; these leaves invariably indicate the arm limb, growing out horizontally, and articulated, forming at each joint one or more balls; coming out with the arm limb, we have almost invariably a branch limb, with several balls—or a stem with one to three balls. The stalk is *ligno*-herbaceous and *pubescent*—and in our climate an annual, attaining the height of *six to ten feet*. The period of flowering is from 10th *June to frost;* the calix double, the outer one three-cleft; capsule 3 to 5 *celled*, with 7 to 9 *seeds* in a cell, involved in the staple. Early in the morning the *milk white** bloom may be seen, in the form of a conic scroll, emerging from the fringe work of its outer calix; and with the rising sun it unfolds the segments of its petal, and by one hour by sun we behold the full blown bell-formed flower. Thus, blooming white, it remains till 12 o'clock, when within 15 minutes thereafter, we may observe by the naked eye, a faint ray of pink skirting the thin margins of the segments, which pink color may be seen by one to two o'clock, to have diffused itself throughout the bloom. It thus continues changing from white to red, till sun up the next morning, when it will be found a beautiful brilliant pink; now with the rising sun it gradually wilts, and by 12 o'lock it drops off, leaving a distinctly formed ball, securely sheltered by its calix.

This description, which is strictly correct, differs in several of its particulars from Eaton's, and from the miserably erroneous engraving and description of the same, to be found at page 307 of "Sears' Wonders of the World;" and yet strange to say, this same engraving, with probably but a single correct feature, is copied into the "American Agriculturist," in illustration of an article by Dr. Philips. I might point out a half dozen errors in that engraving; it will answer my present purpose however, that I detain you with but two or three such notices. You will first observe the bloom and the description given, and you will agree with me at once, that Mr. Sears has been *bugged* by an okra flower; the cotton bloom in its healthy state, is never so much flared, nor has it any *red spots* in the bottom. Observe again to the left, that young ball with its *drooping calix;* that is altogether unnatural, and is never seen except where the worm is or has been. You will observe the same error in the opening ball; every little boy, who has picked but fifty pounds of cotton, will tell you if that were the fact, there would be no trashy cotton. I am sure Dr. Philips has detected these blunders, with others equally evipent. This I suppose will be sonsidered a small matter, about which nobody is at fault; because even intelligent planters have never thought it worth while to give a correct description of the cotton plant. This same carelessness is observed, when we cast our eyes upon the large map of Alabama; we there see a most imposing engraving of a large *fancy plant*, with its one hundred and one errors, if called a cotton plant. Observe again, the beautiful and chaste vignette of our own excellent and cherished "Southern Cultivator; we see there an engraving designed for the cotton plant, yet I am sure if the *pendent* open balls were painted *red*, you would sooner take it for a pomegrante bush!

To the planter who is satisfied merely to plod along the inanimate imitator of some skinning neighbor, this sketch will appear a tedious and uninteresting detail. I am convinced, however, of its importanee—and there is a spirit of improvement abroad in the land, which requires just such detail of fact; because it is not possible, at least it is extremely improbable, that we succeed in improving and perfecting the culture of any article of vegetation until we make ourselves *well* acquainted with its natural characteristics. Hence I remark, that when we look upon the stately pyramidal appearance of an improved cotton stalk, grown under favorable circumstances, we observe at once—indeed, we are forcibly struck with the distance proper in its arrangement upon the soil, which is so clearly indicated. Again, we observe an uncommonly large amount of foliage for an annual, besides some 3 to 4 lbs of seed cotton upon the stalk—literally crowded from its base, upon an area of some 15 to 20 square feet, to its apex, at the height of 6 feet. Now in view of these clearly established facts, the invariable effect of certain well defined causes, I shall not suppose any planter so dull as not to know what course to pursue, if he find that it require a given amount of grain to grow a pig to a given size in one year, that to produce another such pig the next season, the necessary amount of food or grain must be first supplied. Without the food, the pig will be found at the end of the year a *landpike*; and so the cotton, without the geine and manure, will be found, as is too common, the *little Frederick!* Were I to assume an affirmative position in this analogy, every planter would reply instanter, and most indignantly too—Sir, you are behind the times; our own sage Franklin, more than a half century ago, in his friendly advice to Poor Richard, has assured us, "that by constantly taking out of the meal tub and never putting in, we shall soon find the bottom." Philosophically true this—good homespun and sound doctrine; yet plain and simple as be this doctrine, the cotton planter knows it only in song—his acquaintance with this golden truth is theoretic entirely. His exhausted fields and dwarfish puny cotton, tell tales more positively contradictory and gloomy, than I have room or inclination here to enumerate.

The governing principle then, in this improvement, is to give constant and diligent attention to keep the *meal tub well supplied*. In the first place, produce and haul out upon your land a sufficiency of good manure, fully to supply the requirements of the plant all the season. In another place, I have shown that it is a perfectly easy matter to produce this manure, to which I will further add here, that the decaying materials abound spontaneously, scattered up and down, filling each nook and corner on every plantation, during all the season, a waisting nuisance that might be casily collected and converted into a profitable revenue, if but one-third the time and attention otherwise sedulously consumed in the butchery of the soil, in a petit war against grass and weeds, the inevitable produce of such latitudinarian systems of culture, was devoted to that most valuable employment. In this most important department of agriculture, science is actively engaged in rendering the planter the most essential service.

Having derived these important indications from the figure and natural characteristics of a perfectly matured cotton plant, the judgment of the planter is brought into active requisition in properly adjusting its relative position in width of row and its situation on the drill, in order that we secure the greatest possible advantage in its subsequent culture. My own experience inclines me to the opinion, that when land is improved only to the extent of 150 to 200 bushels of manure per acre, less than fifteen square superficial feet to each stalk will be too close. Nor will improvement carried to five times that extent, require greater distance than twenty square feet to each stalk. Since, then, it is found necessary that each stalk occupy this distance, it would appear that the simplest course would be to lay off the rows equi distant each way. The question is frequently asked, "Why not lay off the land 4 by 4 feet, or 5 by 4 feet?" There is a very serious objection to this simple plan, which every planter must perceive on a moment's reflection. In either case, the cotton will be found so entirely interlocked by the 20th June to the first of July, as to forbid further work; yet we find, under the most favorable circumstances of seasons and culture, that it will take the stalk until the 10th July to attain the height of six feet, short of which we should not top it, nor earlier in the season; and it is very desirable, and highly necessary even, that the cotton be swept once after topping it, which we find impracticable unless the rows be laid off wide one way, with a view to that desirable operation. Upon land then, that is but moderately improved, I prefer the rows north and south 5 feet, by 3 feet east and west; and upon land in a higher state of improvement, 6 feet by 40 inches will be found the best distance. Though we shall find the stalk a little crowded the narrow way by this course, yet we secure the more important advantage, in being able to scrape and pulverize the surface later in the season. I suppose there to be other advantages likewise, in this plan of laying the rows at right angles, north and south, and east and west, and bedding the land north and south, to which, however, I must refer at another time.

The next object to which I shall direct your attention, is the mode of culture which I conceive to be necessary in the after management

*The Sea Island Cotton bloom is yellow.

of the cotton plant; the correctness, and even superiority of which, I hope to establish as clearly here, as in practice it has so triumphantly succeeded. The constant and invariable success which attends this improvement in my hands, is the result of a *strict and scrupulous adherence to system in its management.* Every science and every profession among men, which is either useful or valuable, acquires both respect and importance on account of system. System is essential to certain success in every undertaking; and especially is it necessary in this first of all professions. The principal object I have had in view, in all this manuring, thorough plowing, laying off and bedding the land previous to planting the seed, has not been to plant alone; men plant abstractly, as handsomely and with the same facility, with less labor; it has been done to encourage and facilitate the early and extensive growth of the fibrous and soil roots, by which means the plant readily and equally early, augments the extent of surface (in number and length of its limbs,) for fruiting, and the consequent number of its organs of atmospheric nutrition. The immense advantages which the plant derives from an early accomplishment of an object so desirable, are at once obvious when we recollect "that the soil and atmosphere offer the same kind of nourishment to the roots and leaves of the plant."—There can be no reasonable doubt, though I possess not the means of positive measurement, but that the plant multiplies its organs of atmospheric nutrition in precisely the same ratio that an improved and judicious system of culture facilitates the growth and prosperity of its roots. There is also another interesting consideration connected with this subject, which I esteem worthy of notice in this place; which is, that though the soil and atmosphere offer the same kind of nourishment to the roots and leaves of the plant, yet the character of its assimilation and consequent appropriation widely differ. My own opinion is, that the roots assimilate food for the production of the stems and leaves mainly, and that the leaves assimilate the same for the production and maturity of the blooms and fruit. I do not claim originality for this opinion; I think I have seen it hinted at in some work on vegetable physiology, though I cannot now say where.* I have been governed by this impression, at least in conducting my experiments, which have not as yet been of a sufficiently varied character to enable me to determine and assert the fact positively. My attention was first called to this interesting subject while investigating the cause and effect of rust upon the cotton plant, which every planter has seen, some of the features of which would seem to strengthen this position. How desirable is it, then, if all this be fact, that we adopt such system in our after management as will not only preserve this natural chain of action unimpaired, but encourage its progressive prosperity? It is not enough, however, that we thus dismiss this part of the subject; its importance requires of us a much more simple and extended view.

We will commence then, at that age of the plant at which it is first worked, by examining the roots of two stalks: we pull up one in the ordinary way of thinning cotton, that is, we take hold of the stem and draw it up, and we have a single long root (in most instances) tapering to a point; we have simply the tap-root. We will take up the other with a spade or hoe, the stalk standing in the centre of some six to eight inches square of soil; we then gently sift or shake the soil from the roots, and we have a fair specimen of the cotton root: we have what is properly meant by tap-root, a plant with a main root long and tap-like or tapering, dipping deep into the soil; beside this tap root, however, we find an almost innumerable quantity of fibrous or surface roots diverging in every direction, as long in many instances as the tap root itself, and coming out generally from one-half to one inch below the surface. This is a fact worthy of notice, with which every planter may, if not already aware of it, acquaint himself early the next season. This may appear to some persons a very simple and a very trivial investigation, yet I find in it a most satisfactory solution of the immense injury which the cotton plant sustains from the multifarious policy of the country. I remark then, as the plant comes forward, so the tap root (where it exists, though an unnecessary appendage in our climate,) sinks deep into the soil, while the fibrous or surface roots multiply and shoot in every direction; hence I say, "as early as possibly convenient" after the plant is up, "plow out the middles *well*, the wide way, having first run around the plant with a scooter plow." The main object in this operation, is once more, before the surface roots have come out so far as to sustain injury, to thoroughly loosen the soil and again commingle it with the manure. The plant being now thinned down to two or three stalks in a place, and a small quantity of soil molded about the hill, is left in this most favorable and growing situation. In the course of some fifteen to twenty days, when we return to work it again, it will be found to have come forward rapidly, standing from 12 to 15 inches in height and finely limbed. If we now take the trouble to examine a hill or stalk, we shall find an amount of earth included within the circuit of these fibrous and soil roots, as they penetrate all parts of the loamy mold in pursuit of the luscious geine, (like a flock of sheep fresh upon a rich pasture,) that will weigh more than a hand can tote. With these facts before us, let us turn our attention for a moment to the practices of the country at this stage of operations. One planter will now commence work, and the plant standing from 10 to 12 inches high, "with a bull-tongue or scooter plow," and he will dagger into the soil, as close to the plant as he can possibly get, some 3 to 4 inches deep—he says, "to loose up the earth, that the tap-root may go down." Another planter will again, the second and third time, run the bar of a turn plow to the cotton—he says, "to kill the grass;" thus it stands bedded in the middles, and "steaming" a few days, when these hot beds are plowed out; though I have even seen it barred the third time before plowing out the middles! All this may answer the *purpose fully*, and even look very well to the planter that operates to kill grass; but we have a latent cause operating destructively in this practice, and though the *certain effect* is not always willingly recognized in the turning yellow and falling leaves of the plant, it is not however the less obvious. The planters operating thus, will tell you, in the first instance, "this cotton has received a fine working; there's not a sprig of grass or weeds to be seen; but it does not grow off as it should; this *little dry spell* has checked its growth." But partial showers may have fallen upon the other man's cotton; he says, "See my cotton; how clean and nice it is worked, though it is too wet and does not grow; *rainy weather* does not suit cotton." This is the logic (I will not say universal) of the devotees of this *grass killing* policy, in accounting for its disastrous consequences, and will, I am sure, be very readily recognized as such by every impartial man. Now, the truth is, I will illustrate the whole difficulty here, by a very simple, though rather uncouth simile; it is however not the less pertinent to my present purpose, because men are not to be benefitted, nor will they improve in the practice of any science or profession, unless they exercise the faculties of thinking and reasoning, though such exercise be bought at the expense of decent ridicule. We will suppose the planter operation in this was, having received a pair of fine Berkshire pigs, says to his trusty man, Sambo, "take this bushel of corn to the barn-yard and feed those pigs well; I want them to grow *large* and *fat*." Well, Sambo, always anxious to carry out the views of his master, and having carefully watched his operations in the treatment of his cotton, to make *it grow large*, takes up the basket, and then providing himself with a hammer or hatchet, he proceeds to the yard; he first takes hold upon the gentle, unsuspecting grunters, one by one, and with his instrument he knocks or breaks out their teeth, and then throwing down the corn, he returns to the house with spirits buoyant in the consciousness of having so consistently discharged his duty! "Well, Sambo, you have given those pigs plenty of corn, ha?" "Yes, sir, they are well fed." In a few days he takes a friend to look at the fine Berkshires. Yes, Sambo has given them corn plentifully; there it lies by them! But this is too plain a case; the pigs have the *teeth-ache, and they are broken off, too!* neither the wet nor the dry weather has caused the mischief here! And yet the pigs, like the cotton, have only *their teeth broken off!!* Poor Sambo! we leave him to explain to the world the rationale of this *root and teeth breaking policy.*

N. B. Cloud, M. D.

Macon Co., Ala., Nov. 1, 1843.

*Since writing the above, I see, in a report of the sitting of the Academy of Sciences for August the 14th, a paper was received from M. Dutrochet, on the production and ripening of fruits. This gentleman states "that the removal of the leaves of fruit trees, in order to expose the fruit to the direct influence of the air and light, is exceedingly destructive." I suppose he means destructive to the fruit. If so, his experiments would seem to corroborate this opinion.

From the Albany Cultivator.

LETTER OF MR. ELLSWORTH—BOMMER'S PATENT.

We invite the attention of the readers of the Cultivator to the annexed letter of the Hon. Mr. Ellsworth, chief of the Patent office at Washington, on the subject of patents, and the claims of Mr. Bommer in particular. There is no subject in the whole range of agriculture, of more interest to the farmer, than that of manures; and any improvement in its manufacture, by which its quantity and quality may be increased, will be received by them with favor. That manures made in the way recommended by Mr. Bommer, or according to the patent claimed by him, are of superior quality, no one acquainted with that method can doubt. But if, as Mr. Ellsworth seems inclined to suppose, it is only the French method, with some unimportant additions, so far as the making of the manure, or its quality is concerned, that method should be generally known, that all may avail themselves of its advantages, and we thank Mr. Ellsworth for enabling us to give the specifications a place in the Cultivator. We have given the large pamphlet, just published by Mr. Bommer, and containing an ample account of his method and its advantages, a copy of which he has kindly placed in our hands, an attentive perusal, and can safely say there are few, if any, publications on the subject there discussed, whatever may be their pretensions, which combine such a mass of practical instruction on the preparation and use of manures. Of the legality of the patent under which he is acting, we do not express an opinion; but we know that the method used by him, and described in the pamphlet, a copy of which is furnished every purchaser of a right, will make manure in any quantity, and of the best quality for almost every kind of cultivated crop. Of the French method, as described in the specifications, we are not competent to judge, having never witnessed its effects; we should, however, prefer purchasing Mr. B.'s book, in which the whole process is detailed.

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LETTER FROM MR. ELLSWORTH.

Washington City,
Patent Office, Nov. 3, 1843.

Messrs. Gaylord & Tucker:—I noticed in your last number of the Cultivator, just at hand, a particular notice of Bommer's process—also his advertisement announcing "Bommer's manure method, secured by letters patent," and referring to "documents recorded in the patent office," to prove his rights. This advertisement has greatly increased the burden of answering requests for copies of "Bommer's Patent." Whilst I have studiously avoided expressing an opinion on cases pending or decided, yet as special reference is now made to the bureau to sustain the advertisement, and fearing that the public may be misled by my silence, I hasten to state the facts as they appear of record. Mr. Bommer, on the 12th of May, 1843, presented an applica

Archibald Smith
ufebr
Roswell Ga

tion for a patent for making manure. This application was duly examined, and rejected for want of novelty. No appeal was taken. The application was withdrawn, and $20, the usual sum allowed on withdrawals, paid to Mr. Bommer on the 6th of July last. No other application has been made by Mr. Bommer for a patent for similar purposes.* It may not be improper to state that Messrs. Baer & Gouliart, in June, 1843, obtained a patent for an alleged improvement on the method of making manure, patented in France by Jauffret, which said method, however, has not been patented in the United States, and is therefore free to the public. How far the public are restricted in the use of foreign inventions, may be ascertained by referring to the claim of the American patent, which, you will perceive, is restricted to the preparation of the *heap* and the mode of *applying* the lye to the same; the *ingredients*—in other words, the *lye itself*, not being claimed. That no injustice may be done to the parties concerned, I send you a copy of the American patent, and only add that Mr. Bommer has become an assignee for several States, under this last mentioned patent.

Yours, &c. H. L. Ellsworth.

Copy of Baer & Gouliart's Patent.—To all whom it may concern: Be it known, that we, Charles Baer and John Gouliart, of the city of Baltimore, in the State of Maryland, have invented certain new and useful improvements in the manner of making manure, which has been for many years practiced in France, and has been there secured by Letters Patent under the name of "La Methode Jauffret," and we do hereby declare that the following is a full and exact description thereof.

In the method of Mr. Jauffret, a pit or reservoir is prepared of sufficient size to contain the quantity of prepared lye which may be required by the nature of the establishment. This reservoir or vat is intended to be a receptacle of water saturated with decomposed animal and vegetable matters, and is further to receive the ingredients hereinafter named; such water is to be found on nearly every farm, and it may be augmented by the drainings of stables, by dish water, suds, and other substances of a like nature.

Mr. Jauffret, however, finally prepares his lye, by which the fermentation of the articles to be converted into manure is to be promoted, in the following manner, under various modifications.

For the conversion of from one to two thousand pounds of vegetable matter into manure, he takes about

200	lbs.	of night soil,
200	"	calcined plaster in powder,
50	"	wood soot,
20	"	wood ashes unleached,
60	"	quick lime,
1	"	common salt,
1	"	rough saltpetre,
150	"	lye or ferment drainings from a Jauffret manure heap.

These ingredients are, in many cases, to be replaced by others; this lye to be prepared 10 or 15 days before use. The quantity of materials above named, for the conversion of from 1 to 2,000 lbs. of straw or other dry vegetable stalks, will answer for about double that quantity of green vegetable matter.

In using this lye, the plan of Mr. Jauffret is to steep in it the vegetable fibres, which are to be acted upon by throwing them into the vat or reservoir containing it, and removing it thence at great labor so as to form a high heap in the vicinity of the vat, into which the drainings are allowed to run.

We have thus given a brief outline of the method of Mr. Jauffret, the same appearing necessary to the understanding of our improvements, which consist in our omitting altogether the excessive labor of steeping the materials to be acted upon in the lye, and elevating them from thence to the heap; and also in the preparation of a lye, which is equally effective with that of Jauffret, at much less cost, and which can be used immediately on its being made, thereby saving the delay of 10 or 15 days, which "La Methode Jauffret" requires.

We prepare a reservoir to contain the lye as usual, and in the immediate vicinity of this, we make our stacks or heaps of vegetable matter, which is to be converted into manure.

We give to the ground, where the heap or pile is to be made, an inclination towards the vat; if the ground is a firm clay, it may be merely sloped, and have shallow trenches dug on its surface to conduct the drainings back into the vat; or it may have a flooring of timber, brick or stone, as may be preferred, which may be so trenched as to conduct the whole towards a central drain.—When our platform or flooring is of clay, we cover the trenches and whole surface of it with brushwood or rails, so as to form a temporary grating that will support the weight of the heap, and thus insure a drainage, and the admission of air to the heap from below.

The materials to be converted into manure, we pile up on this prepared platform immediately as it is delivered by the carts, and this we sometimes continue to do until the heap has attained the whole height to be given to it, when, by the use of a pump, buckets, or other suitable means, we raise the lye from the vat and pour it on to the heap, continuing so to do until the whole mass is saturated; we, in general, however, raise the heap to a height of two, three or four feet, more or less, and then pour on a portion of lye, repeating this as the height of the pile is increased; this procedure obviates the necessity of lifting the whole of the lye to the full height of the heap.

The materials which we employ in making the lye, may be limited to the following, namely: cow, horse or hog's dung, or night soil, the urine draining from stables, and quick lime.—The ingredients used to be intimately mixed with a sufficient quantity of saturated water.

Two of the kinds of animal dung we have found to answer as well as a larger number. A perfectly good lye will be made by taking one barrel each of two of the species of dung, two of the urinary drainings, one of quick lime, and about 50 barrels of saturated water, which is then to be used as above explained.

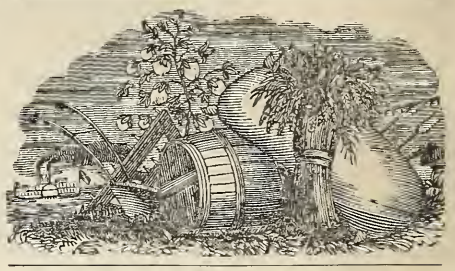
What we claim as our improvement on Jauffret's method of forming manure by the rapid fermentation of vegetable fibres, is, first, the forming of the said vegetable matter into piles or heaps, without its being first immersed in the prepared lye, and the subsequently saturating the same by the pouring on the lye in the manner set forth.

Charles Baer.
John Gouliart.

Witnesses,
Th. M. Abbett,
J. R. Abbett.
} (Patented June 24, 1843.

*Mr. Bommer informs us that on finding his own claim rejected, he was induced to make an arrangement with Baer & Gouliart, by whom his claim was again presented, and the patent secured in their names. —Eds.

Book Farming.—"I pity the stupidity of the man who thinks that if we use books, we must close our eyes against the light that is beaming upon us from other sources, or that we must become mere theorisers, and the victims of ruinous experiments. What! does a man loose his own common sense, his prudence and his judgment, whenever he takes up an agricultural paper, or opens a book upon husbandry? Cannot one make himself acquainted with the doings of others, without loosing his power to judge whether it would be well for him, in his circumstances, to copy their examples? Our brains are not so weak as this, The knowledge acquired from books does not make us all mad.—But if it did, there would be more zest and true enjoyment in the learned madman's course, than in that of him who has learned out, and who thinks that books cannot make him wiser. I ask what book-farming is? Common book-farming is, learning by means of books, new facts, opinions, results of experiments, modes of operation, and the using such parts of the information as can be turned to profitable account in our individual situations. If this be folly, we are content to be called fools. An agricultural paper will be worth to you every month, if not every week, more than its annual cost."



WEDNESDAY, JANUARY 24, 1844.

THE BACK VOLUME.

All new subscribers who may desire it, can obtain the first volume, neatly bound in boards, at one dollar the volume.

SEND IN YOUR LISTS.

As it is very important in regulating our edition to know what number of subscribers will probably be obtained, we beg our friends to send in their lists at the earliest possible day.

Mr. Baxter's Address.—In this number will be found the first part of the address delivered before the Hancock Planters' Club, in November last, by Eli Baxter, Esq., which we commend to the considerate attention of the reader. It abounds in home truths, which, if carefully weighed, cannot fail to be productive of much good. No planter, or head of a family, in Georgia, should omit to give it a careful perusal. Especially do we commend it to the youth—many of whom are growing up with erroneous notions of the true position of the agriculturist in society.

Improved Culture of Cotton.—The reader will find, in this number the third of the series of articles of Dr. Cloud, in defence of his system of the culture of cotton. Accompanying the article of the Dr., in the Albany Cultivator, is a drawing, representing the top and the 35th and 36th branches of a stalk of cotton cultivated by his system, which is certainly a very flattering testimonial of the success of his method.

The Doctor's gallantry has not only induced him to bestow the highest praise upon this drawing of the plant, which was executed by a lady, but has led him into an attack upon the correctness of all other delineations, among which we come in for a share, and the very beautiful cotton stalk in our head is compared to a pomegranate. Verily, this is not very flattering to the taste or capacity of the artist; but as we know not who he was, having copied it from a vignette on a bank bill, at a season of the year (mid-winter) when we could not obtain an original drawing, we shall not enter the list against our friend, the Dr., as the merit or demerit belongs wholly to another.

Curing Sweet Potatoes.—In our next, we will endeavor to afford J. L. Moody all the light on this subject at our command.

Agricultural Societies.—Again and again have we urged the necessity of forming Societies and Clubs in every county and neighborhood; and we are pleased to observe that in several counties, a proper spirit has been aroused. There are, however, too many counties in which no move has been made on the subject.—This state of things should not continue, particularly in a community where there is so much necessity for improvement; and we therefore repeat our solicitation to the friends of agricultural improvement, to organize Societies. Let not the indifference of a few self-conceited farmers, who think that "nothing can be taught them about farming," dampen your ardor in the good cause. You who are willing to profit by the experience and counsel of others, know the advantages to accrue from such Societies, and you should not faulter in the good work.

While on this subject, we beg leave to introduce the following very just and sensible remarks of the "New Genesee Farmer," which we commend to the attention of every friend of agriculture.

How to Sustain County Societies.—Those who desire to see their County Agricultural Societies increase in numbers, and in spirit and usefulness should take pains to *increase the circulation of agricultural papers* among the farmers of their county. In no other way can the object be so easily gained. All experience and observation have shown that *reading farmers* are the only ones that can be relied on to sustain and carry forward these grand means of improvement. Take your horses, then, ye friends of agriculture, and spend a day or two in calling on the farmers of your town or county, and induce them ALL to become reading farmers—they, or their children, will thank you for it hereafter.

Progress of Improvement.—From "E. W." of Narcoochee, Habersham county, we have the following flattering evidence of the lively interest which the subject of Agriculture is exciting among our citizens, from which we confidently predict the most satisfactory results. No citizen in Georgia has a finer opportunity to compete with the Kentuckian, in a large yield of corn, than "E. W." and we rejoice to see that he "*wont stay beat.*" This is the right spirit, and augurs most favorably for the cause of agricultural improvement. We hope he will enter fully into the rivalry, and give us, at the expiration of the year, the actual result—having accurately measured the land and its product.

We concur fully with our correspondent, in the propriety of converting much of the land in the Northwestern part of Georgia, into meadow lands and the culture of grasses. It is certainly a reflection upon our home industry and enterprise, that a large portion, (in fact, quite all,) of the Hay consumed in the Southern and Eastern sections of Georgia, particularly in the cities, is supplied by New England. The same remark will apply with nearly equal force in reference to Butter and Cheese. It requires time, however, to correct these things; and we doubt not, a few years hence, the hardy yeomanry of our Northwestern counties will supply many of the articles which are now obtained from abroad.—If we mistake not, "E. W." is a most worthy son of New England, and therefore speaks advisedly of the capacity of the "Mountain Hills" to produce Irish Potatoes. We think he might also have added, with great propriety, Apples and, perhaps, Pears. For all of these articles, a large amount of money is annually sent abroad—which, by a judicious system of economy and well directed agricultural industry, should be kept at home.

We hope "E. W." will frequently seek our columns to communicate his well digested practical views.

Mr. Editor:—I am pleased to receive the first number of the second volume of the "Southern Cultivator,"—a paper which no Planter should be without. It is exceedingly gratifying to hear, through the "Cultivator," what our brother farmers, in this and other States, are doing. Our friend in Kentucky beat me at raising corn last year, but I *wont stay beat.* We have lands in Georgia which will yield equal to their best in Kentucky. In 1842, I had a swamp cleared, containing about 20 acres: it was late in May before it was ready for planting; and, notwithstanding, there was much wet weather, (which prevented our cultivating it as it should have been,) it yielded from 80 to 100 bushels to the acre—besides, a fine crop of *pumpkins* and *melons.*

From many year's experience, I am convinced we should plant less, and cultivate our lands better. For years, I gave my attention to the raising of corn; but I find our lands can be used much more profitably, and at less expense—not in "digging" them up for gold, oh no!—but in sowing grass, and turning them into meadows. We can make as good hay, and as much as can be raised on their best meadows in the New England States. Off of 10 acres, we can make hay enough to winter 300 head of cattle and mules. The "Mountain Range," which is free to all, is inexhaustible, affording fine grass for cattle and horses from April to December.

A good farmer should have at least 50 milch cows, and make Goshen Butter and Cheese enough to supply your city.—Our mountain hills grow the *genuine Irish Potatoes*, equal in quality and quantity, to the Potatoes raised in Maine.—We ought, by all means, to send, from Habersham county, 1000 barrels Potatoes. The question is, why don't we do it? E. W.

Curing Corn.—The importance of this crop renders the subject of the best method of gathering and curing it, one of deep interest to the planter. We have, therefore, copied into this number, an article from the "Cultivator," which expresses a decided preference for the plan of cutting off the stalk at the ground, and curing stalks, corn and fodder all together. While we regard this plan as of very doubtful propriety at the South, where the crop generally ripens in September, long before frost, we nevertheless deem it of sufficient importance to give the views of the editors, and invite the attention of our planters to their consideration, with the hope that some of them will attest their applicability to this climate by actual experiments.

Fine Hogs.—J. D. Copeland, of Cracker's Neck, Greene county, writes us as follows:—

On the 28th December last, I killed a couple of "Land Pikes," or Common Stock Pigs. On the day I butchered them, they were just 21 months and 8 days old, and they weighed as follows—604 and 441 lbs., making together 1045 lbs. neat pork; and saved from both 207 lbs. of first rate lard. My manner of raising them is quite simple—they ran in my kitchen yard as pets until they were probably 6 months old; I then put them in a lot, and fed them on corn and slops from the kitchen occasionally, until some 4 weeks before I killed them—I then put them in a close pen, and fattened them on corn meal. From the above experiment, I am fully convinced that our native stock is good enough, if well attended to.

Best Method of Curing Corn.—Our Indian corn crop is one of the most valuable, if not *the* most valuable crop cultivated in the United States, and every thing relative to the best methods of growing and securing it are proportionably important. In securing Indian corn, two methods are commonly used; the first, is to top the corn, by cutting the stalk immediately above the ear, and this is usually done as soon as the grain is glazed, though some farmers scarcely wait for this. The second is to cut up the corn by the bottom as soon as the ear is glazed, bind the stalks and ears in small bundles, set them up, and let them stand till thoroughly cured, In the first method only the upper part of the stalk is saved for fodder, but the corn ripens finely, and nothing can be more beautiful than a field in which the husks have fallen from the ripened grain, and the thick golden ears give a promise of the rich harvest at hand. Still we prefer the second method, and that from ample experience of both. We have our corn cut up by the bottom, because in that way we save the whole of the stalks for fodder, and that is no unimportant matter to the farmer. In topping, only the poorest part of the stalk is saved, for if cut and cured properly, there is no more nutritious food for animals than the stalk of corn. It is true, when very large, cattle and sheep are unable to eat them; but if converted into chaff by a cutting machine, as they can easily be, there is no food eaten more readily, or with more profit. It is not hazarding much to say that there is more value in an acre of cornstalks cut by the bottom and properly fed out, than in an acre of ordinary hay, and no farmer can afford to dispense with such an item in providing for his stock. But the saving in the stalk is not all; experiments show that there is a gain in the grain of nearly 20 per cent in cutting by the bottom, in preference to topping. Experiments made by Mr. Clark, Judge Buel, and others, and recorded in the volumes of the Old Genesee Farmer, and the Cultivator, place the matter beyond a doubt. In one made by Mr. Clark, he found the yield per acre of the corn topped, to be 47 bush. 18 lbs., and the untopped 60 bush. 8 lbs. From some experiments instituted by ourselves several years since, it was ascertained that there was no difference of consequence in the product, when the corn was left on the untouched stalks till harvest, and when they were cut by the bottom after the corn was well glazed, but that both these methods gave a greater product than when topped in the usual manner. It is said that when corn is topped, and after the corn is gathered, that cattle will eat all that is valuable of the stalks as they stand in the field. This is certainly a mistake, as the most nutritious part, the main stalk itself, is generally left untouched by them. If the corn crop is well manured, as it should be, the cultivation of the season is an excellent preparation for wheat, and some of the best farmers of our country use the corn crop for this purpose. In this case cutting up by the bottom is indispensable for the getting in of the wheat properly; and if it is intended to follow the corn with spring crops, as is frequently done, such as wheat, oats or barley, it will be found that the absence of the large stalks that disfigure corn grounds when only topped, will greatly facilitate both the putting in, and the harvesting of these crops. For all these reasons, and the additional one, that it is only by cutting at the bottom that corn can be saved from the effects of early frosts when they occur, we are decidedly of the opinion that the corn crop of the country might annually be increased in value, were the method of cutting it by the bottom as soon as the grain is fully glazed, to become general.—*Albany Cultivator.*

REWARD OF INDUSTRY.—Among the competitors for premiums for the best improved farms at the Middlesex County Agricultural Fair, there were several instances of notable industry; we copy the following from the Report of the Committee, because we look upon it as evincing a degree of patient industry and marked success that cannot fail, by its example, of impressing upon the reader how vain is the conclusion which some arrive at, that, because difficulty may present itself, it cannot be overcome. The reader we think, will say with us, that though Mr. Walker received the *fourth* premium, his skill and industry would have entitled him to the first almost any where else than in a region where, from its rock-bound soil, men have to enact the part of men.—*Am. Farmer.*

"The farm of George W. Walker, of Marlborough, contains about 70 acres of land.—Nine years ago Mr. Walker purchased a very rough, rocky pasture, on one of the hills in Marlboro', containing 45 acres. At that time he was young and poor, with no capital but his labor to begin with, and of course he purchased on credit. He commenced cutting the bushes, digging out stone, and laying wall. He managed to build a barn 31 by 32 feet. He was in the habit of "working out" some portion of his time, and after he had finished his day's work, he would return to his own land, moon-light nights, and work among the stones till 11 or 12 o'clock. and then sleep in his barn. He has now 13 acres in a good state of cultivation. He has built him a house, laid 175 rods of stone wall, paid for his place, and has some money at interest, and all this has been done with his own hands, for the last two years, with the assistance of a boy now 9 years old. Let all poor young farmers look at this, and be assured that persevering industry will be sure to meet its reward.

The committee award to Mr. Walker the 4th premium of $12.

FARMERS' BOYS.—There is a wholesome change going on in public sentiment, which promises to do much for the improvement of the country and the condition of the people. We mean the change which is taking place among the young in relation to the great work of tilling the soil. A few years ago, and the young men left their fathers' farms as soon as they could get away from them—and the fathers themselves not unfrequently encouraged them in it. A hard hand and a sunburnt face were deemed poor recommendations in life; and more "genteel" modes of getting a living were sought by the young. But they are beginning to look at the matter in a different light. The dull times thro' which we have passed, lately, have opened their eyes to the fact, that after all there is nothing like a farmer to stand through all times, and they are quite content to stay at home. The result will be, that our farms will be better cultivated, and produce more; that large farms, which are not half cultivated, will be divided, and well husbanded; and that we shall have a large and virtuous population scattered all over our fertile hills.—*Nashua Telegraph.*

HINTS TO YOUNG FARMERS.—Consider your calling both elevated and important: never be above it, nor be ashamed of the frock and apron.

Never hire a man to do a piece of work which you can do yourself.

Instead of spending a rainy day idly, repair whatever wants mending, or post your accounts.

By driving your business before you, and not permitting it to drive you, you will have opportunities to indulge in the luxury of well applied leisure.

Never trust your money in the hands of that man who will put his own at hazard.

Take an agricultural paper, and some good family paper, and pay for them in advance.

Remember that economy and industry are the two great pillars of the farmer's prosperity.

Never run in debt without a reasonable probability of paying at the time agreed.

Never buy any thing at auction because the article is going cheap, unless you have use for it.

In December, reckon and settle with all those with whom you have accounts—pay your shop bills and your mechanics, if not promptly done at the time.

Put off no business for to-morrow that can be done to-day.—*Ohio Repository.*

LEAVES.—Among the many materials which at this season may be collected for manure, leaves are far from being the least valuable.—As soon as old Boreas has shaken down the withered foliage, harness up your team, and devote a day or so to hauling in a supply to be used as litter for your hogs, sheep, cows, horses and other domestic animals, and whose comfort during winter, is, like your own, promoted by the luxury of a warm bed. In this way, very important and valuable acquisitions may be made in a short time, and without an outlay of much expense.—*Maine Cultivator.*

A St. Louis paper tells a story of a disconsolate widower, who, on seeing the remains of his late wife lowered into the grave, exclaimed with tears in his eyes: "Well, I've lost hogs and I've lost cows, but I never had anything to cut me up like this."

AUGUSTA MARKET.

WEDNESDAY, P. M., January 24.

Cotton—The activity noticed in the market in our report of the 10th inst., continued, with an advancing market, up to the middle of last week, when prices having attained their maximum, 9¾ cents, the market became very quiet, and on the receipt of later accounts by a transient ship, on Friday last, the market gave way, and prices declined ¼ to ½ cent on all descriptions. The market is now very inactive, and we omit quotations, as both buyers and sellers seem disposed to await later accounts from abroad, which are expected daily.

Exchange—Checks are at par on Charleston, Savannah and New York. Central money is very steady at 3 to 4 per cent discount. Georgia 6 per cent Bonds are firm at 88.

CONTENTS OF THIS NUMBER.

	PAGE.
Agricultural Address, Eli H. Baxter's	9
" Societies	15
Bommer's Patent	13
Corn, best method of curing	15
Cotton, improved culture of	12
Cows, valuable	11
Farmers, hints to young	16
" boys	16
Farming, book	14
Hogs, fine	15
Improvement, progress of	15
Industry, reward of	16
Manure, leaves as	16
Wheat, great yield of	11

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A GENERAL assortment of fresh and genuine GARDEN and FIELD SEED, among which are the following:

Red and White Clover,
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Rye and Orchard do.,
Timothy and Herds do.,
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WM. HAINES, JR.,
No. 232 Broad street, Augusta, Ga.
August 30. 18-tf

AUGUSTA PRICES CURRENT

BAGGING, Hemp	yd.	16	@	20
Tow	"	15	@	18
Gunny	"	18½	@	19
BALE ROPE	lb.	6	@	10
BACON, Hog Round	"	5	@	6½
Hams	"	8	@	10
Shoulders	"	4	@	7
Sides	"	5	@	8
COFFEE, Green prime Cuba,	"	9	@	10
Oridinary to Good	"	7	@	9
St. Domingo	"	7	@	9
Rio	"	9	@	10
Laguira	"	9	@	10
Porto Rico	"	9	@	10
Java	"	11	@	14
CORN	bush.	35	@	50
FLOUR, Canal	bbl.	6 00	@	6 50
Baltimore	"	none.		
Western	"	none.		
Country	"	4 00	@	5 50
FEATHERS	lb.	30	@	37½
IRON, Russia	cwt.	4 50	@	5 00
Swedes, assorted	"	4 50	@	5 00
Hoop	"	7 00	@	8 00
Sheet	"	7 00	@	8 00
Nail Rods	"	7 00	@	8 00
LEATHER, Sole	lb.	23	@	28
Upper	side	1 50	@	2 00
Calf Skins	doz.	18 00	@	36 00
MOLASSES, N. Orleans	gal.	31	@	35
Havana	"	24	@	30
NAILS	lb.	4¾	@	6
OATS	bush.	37½	@	50
PEAS	"	40	@	50
SUGAR, New Orleans	lb.	6	@	9
Havana, white	"	11	@	12½
" brown	"	7	@	8
Muscovado	"	7	@	9
St. Croix	"	8	@	11
Porto Rico	"	7	@	9
Lump	"	14	@	16
Loaf	"	15	@	20
Double Refined	"	12	@	13
SALT, Liverpool ground	bush.	45	@	50
" "	sack	1 75	@	2 00
STEEL, German	lb.	15	@	16
Blistered	"	8	@	12½
TWINE	"	20	@	25
TEA, Behea	"	50	@	75
Souchong	"	60	@	75
Hyson	"	80	@	1 25
Gunpowder	"	1 00	@	1 25

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A SUPPLY of the following varieties of fresh TURNEP SEED just received, viz:

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Large Globe Turnep, } Fine
" White Flat do. } for
" Hanover or White Ruta Baga do } table
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VOL. II. AUGUSTA, GA., FEBRUARY 7, 1844. No. 3.

COMMUNICATIONS.

SPARTA, February 1, 1844.

Mr. Editor—Plowing, though practiced by many, is little understood in this country. Indeed, so little importance is *generally* attached to it, that it is not unfrequently confided, either to the foreman, who is satisfied with any thing that pleases his master, or to an overseer, who is oftener ambitious to acquire a character for a "business man," which, in its literal signification, means to be ahead of every body else in the various operations of the farm, without reference to the quality of the work. Nor are these important personages singular in their notions. It is too often true, that they are encouraged, by the owner or employer, to glide over the farm as rapidly as possible, either directly by words, or by conduct which is unequivocal in its meaning—in bestowing praise when *much* work has been done, and in maintaining profound silence as to its *quality*. It can hardly be supposed in this day of general intelligence, that the subject of plowing is one upon which total ignorance prevails. But it is believed, that there are by far too many practitioners of this noble art, who practise it according to the method of their ancestors; who "trot up the hill and down again" as their daddies did before them. With all such, I have nothing to do on this occasion. They are too skillful to be instructed by "book farming;" too well versed in their business to be benefited by the experience and opinions of their neighbors, when obtained through an agricultural newspaper; too much engaged in watching the phases of the Moon to take "time" to read any thing relative to farming. It is sufficient for all such that they sow their wheat during the dark nights of October; plant their corn on the increase, and their potatoes on the decrease of the moon. Arguments with such are unavailing—successful practice alone can or will teach them.

The paramount object of all winter or spring plowing, is the complete pulverization of the soil—of summer plowing, to lessen the labor of weeding and cleaning the crop, and to make the earth permeable to the atmosphere—of fall plowing, the turning in the grass and weeds which have grown upon the land. It cannot be necessary to adduce reasons in support of the doctrine here laid down, that the earth, to do all that it is possible for it to do in growing and maturing plants, must be *effectually* pulverized to that depth, below which there is no food for plants. The examinations of the curious have discovered the fact, that the small fibrous roots of corn penetrate the soil, in favorable situations, several feet in depth, and by comparing these with similar roots of other plants, we readily conclude, that all fibrous roots grow as *deep* in search of food when it can be found, as the preparation admits and the atmosphere allows. And yet, in the face of this fact, how often do we see the most superficial preparation, if preperation it can be called? How often, as a necessary consequence of imperfect preparation, or what is frequently true, of no preparation whatever, do we hear farmers complain, that their land is so hard "they can't scratch it." A ten day's drought withers and ruins their crops; renders them miserable and unhappy, while their ungrateful feelings are excited against a kind Providence, who ever works for their good if they would but do their duty.

The quality and texture of soils are so various, as to render it impossible to lay down *particular* rules for our guidance in performing this work. Every practical farmer knows that different soils require different management.—But as a general rule, and one that is applicable to all soils, we should plow fully as deep as we find soil, and when practicable, use the much abused turning plow in preference to all others. It cannot be so successfully used, perhaps, on fresh land where there are innumerable trees and stumps, or where many stones abound, as the scooter or colter. But on every other description of land with which I am acquainted, I prefer it to any other plow in use in this section, whether it invert completely, or at an angle of forty-five, or any intermediate angle.—There are, however, hundreds of these plows in use, scarcely worth their weight in iron. An imperfect turning plow I regard as worthless.—The work of such may be passable to the eye merely, but will not bear the thrusts of the walking cane—a certain indication of bad plowing. They should be made so as to cut as deep at the point of the wing as at the point of the plow—the bottom of the furrow then will be like the bottom of a trench. The plowman, by holding it to its proper place, with such an instrument, can break up land as effectually as with the spade. The objections so often urged against this implement, are without foundation. Repudiation is the order of the day in farming as well as in politics. We inconsiderately imbibe opinions that are fallacious, and do not take the trouble to examine them closely, therefore we are prone to adhere to them. If *we* injure our lands in using them, *every* country upon the continent of Europe, that has doubled and quintupled its productions per acre, ought now to be *barren*—so ought the New England States. If they are too hard to the horse, the objection lies against the maker and not the implement.—Where properly made, they are drawn with more ease than any other plow performing the same work. After you have procured such plows as are described above, you will find the coulter, if the subsoil be clay, or clay abounding in disintegrated rock, of incalculable service, if run in the same track with the turning plow, as deep as your strongest horses can pull them. You are then certain that your land is thoroughly broken; that you have formed in the clay a reservoir for superfluous water, which will rise through the pores of the earth, in a dry time, to supply the wants of vegetation. Land so prepared is in a fit state to receive seed. A little drouth, under such circumstances, will be regarded as a blessing; land will be more mellow during the year; the crop will be more luxuriant in its growth, and more abundant at maturity. Such, at least, is the result of one year's experience. Without good plowing and manure, there can be no good farming on our exhausted plantations, if, indeed, any where.

GEORGIAN.

RAYTOWN, GA., February 1st, 1844

Mr. Editor—In perusing the pages of your excellent journal, I find a remedy recommended for the Hollow Horn. Although my experience on this subject is very limited, still, such as it is, I have concluded to give it to you.

For the hollow horn, my rule and practice has been, when a cow brute was observed with sunken eyes, dry nose, and *cold horns*, (which are sure signs of the disease,) is to bore the horn on the under side only, with a common size gimblet—for should the hole in the horn be made too large, the fly might get into the horn and create maggots, which would prove fatal. I do nothing more, unless the holes should close up with matter, I then insert a sharp pointed stick or broom straw, of a proper size, in them occasionally, in order to keep them open, until a cure is effected.

Under this practice I have never lost a cow with the hollow horn, while my neighbors, under different practices, lost many.

Respectfully, your o'bt serv't,

AARON W. GRIER.

Equally silly is he who is killing his land to fill his purse, with him who killed his goose to get the golden egg.

The labor of an editor's life is not so much what he has to write, as what he has to read.

ADDRESS

Delivered before the Hancock Planters' Club, by

ELI H. BAXTER, ESQ., *Nov.* 3, 1843.

Concluded from page 11.

How few planters know how much corn can be raised from one acre of land, well manured and well cultivated. In some sections of the United States they raise 100 bushels of corn, and 35 bushels of wheat per acre. In Hancock, there are some planters that do not gather 100 bushels of corn from 20 acres, and four or five bushels of wheat per acre. It is not surprising then that we have a decaying population. The State makes investments in stocks and internal improvement, with the view of realising interest. What interest, I would ask, has she received upon her bank stock and works of internal improvement? Millions would not cover her losses. Twenty-five thousand dollars expended annually in the way of premiums to agriculture, would treble your productions and population. Your taxes would be trebled without increasing its burden. Whose money do you ask for? Your own. Who pays the tax? Every cent of it comes out of the planter; for the profits of the mechanic and merchant are but profits upon the labor of the husbandman. Do not be put off with the hollow pretence of the politician, that the State is in debt, and injustice will be done the public creditors. It is the most efficient step that the State can take to fill her treasury and pay her debts. If the Legislature refuses this pittance, make it a question at the elections. If you would take half the interest in this matter that you do in the party questions of the day, which are of little or no interest to the public welfare, success would be certain to attend your efforts.

Agricultural papers and periodicals have been considered, by all intelligent men, as a means well calculated to bring about a reformation in agriculture. We patronize, with a liberal hand, the political papers of the day, that cost three times as much per annum as the Cultivator and Farmer's Register, but which do not afford half the instruction. One of the benefits arising from the circulation of these papers is, the increase of the public taste for the business of agriculture. The student will make but little progress in the sciences, if he has no relish for them; the student of law and medicine had better abandon them, if they take no delight in the study, their minds will doze and wander, while their eyes and lips drag lazily over their text books; the rich, successful and enterprising merchant takes as much pleasure in selling a yard of tape as the costly cashmere—to make a successful farmer, we must delight in the bleating of the lamb, the lowing of the cow, and the neighing of the horse; we must delight in the collecting and applying of manures, and in the growing crop. These papers are full of instruction that is substantial and profitable. To the cultivator of the soil they are of incalculable benefit; they come ladened to you, at a cheap rate, with the learning of the chemist, the botanist, geologist and philosopher; they bring to you, in a condensed form, the experience and learning of ten thousand heads, upon all the subjects connected with agriculture; they lay before you the agricultural experience of every age, climate, soil and country; they contain intellectual treats for the scholar as well as the illiterate farmer; they contain fine specimens of eloquence, in the addresses to agricultural societies, by the most distinguished men of Europe and America; they are a valuable dispensatory, without the unintelligible technicalities of the profession; they contain valuable and instructive matter for the housewife; in fine, they are literary omnibuses, well ladened with all the choice productions and discoveries of the age. These papers want patronage; they are not conducted by their proprietors with a view of personal benefit; they are the disinterested labors of the philanthropist for the benefit of his fellow creatures. No family should be without one; they are the cheapest and most valuuble periodicals of the age; no one will ever look back with regret to the money expended for the Southern Cultivator or Farmers' Register.

I come now to the discharge of the most important and interesting part of my duty—and I regret that it has not devolved upon one more skilled and experienced—the improvement and cultivation of our soils. I shall not fatigue your attention with suggestions as to the best mode of planting and cultivating our lands, only so far as it is calculated to improve or deteriorate. We could all make enough if we had good soils to do it upon. The question about which we all feel the deepest interest is, the practicability of renovating and restoring our old worn out lands to more than their original fertility. If we can, then it is clear that we occupy the most valuable lands upon the American continent; and the oldest of us will see the day when the waves of emigration that have been so long rolling from us, will set back to these abandoned lands. That it can be done, I feel as confident as that we shall have day and night, spring and summer, seed time and harvest.

The agricultural statistics of this country and Europe, are full of the most encouraging facts. Many portions of Europe that have been in constant cultivation for more than a thousand years, instead of being exhausted, have increased in fertility. Flanders, which is represented to be a sandy beach, has been so much improved that it is astonishing the world with the quantities of its products. Judge Buel, of New York, has imparted to a pine barren a fertility that is surpassing in its productions the rich lands of Tennessee and Kentucky. Lands that some years since could have been bought at four dollars per acre, cannot now be bought for one hundred and thirty-five dollars per acre. But we need not go to Europe or New York to be satisfied that we can improve our lands. You can be convinced of it in your own State, and in your own county. Mr. Thos. Whaley, a successful and intelligent farmer, is manuring annually every acre that he plants in corn and cotton. From fields that twenty years since were turned out as exhausted, he is now gathering luxuriant crops. We have only to commence the work, and success will attend the effort. We must make it a business, and be as faithful in attending to it as in planting and cultivating our crops. The first thing to be attended to in improvment is, to preserve our broken lands from being washed by the heavy rains. The first step in this part of the business is, to arrest the gullies and clay galls, which may be aptly compared to a cancerous affection upon the human system; they will, unless arrested, continue to dilate and widen, until the whole field is denuded of soil.—Ditching, when done upon correct principles, will effectually prevent their formation. But, unfortunately, all our fields are already gullied. Before we proceed to ditch, these gullies should be filled up and leveled. This can be done with little labor. The pine brush answers an admirable purpose for this object; and if they are not convenient, the fence row and the swamp will furnish you with an abundant material.

Ditches usually cross the gullies at right angles, and if they are not filled before the ditch is made, the water that they collect in times of heavy rains, will form such a body that it will break over the embankment of the ditches opposite the mouth of the gully. I have found it less difficult to fill up these gullies with brush, than to make the embankment high and strong enough to resist the volume of water that collects in them. Every farmer in this part of the State, should set about ditching his plantation. Appropriating one week with all hands, with horse power and the necessary implements, and you would ditch the whole plantation. They afterwards require but little attention to keep them in order. The ditches should be wide but not deep, with descent enough to carry off the water, without washing them deeper than they were made. Two inches every 12 or 15 feet, according to the length, is sufficient. They should never be made by the eye; the level and plumb should indicate the course and fall.

The clay galls, those offensive looking ulcers upon our fields, can only be arrested by being coated first with sand. To apply manure to them without sand, is a waste of labor and of manure. To restore them to sufficient fertility for cultivation is, in my opinion, too costly to be profitable; but a small quantity of sand scattered upon their surface, and then covered with brush, will arrest their further expansion, and nature will soon set them out with pine, which will become valuable for timber or fuel; or you may set them out with the plum tree, which will soon restore them to their original fertility.

In manuring there is a great want of system. We shall never do much at it until we make it a regular business; setting apart so much time of each year, with all our hands, to this branch of the business. If we will but economize our materials for making manure, we should have an abundance, not only to manure crops, but to keep in progress a permanent improvement of our lands. I am clearly convinced, that if we would but economize our cotton seed, and apply them jukiciously, every planter who makes four bags of cotton to the hand, would have a a plenty to manure in the hill, his entire crop of corn. This valuable manure is wasted in planting and in application. They should never be applied to wheat, as it takes too many to the acre to do much good. We loose immense quantities of manure for the want of fencing our sheep, hogs and cattle. The most of farmers pen their cattle, but there is no regularity about it, and instead of changing them at regular periods, they are permitted to occupy the same spot for the entire year, when by moving them ten times the quantity of land could be as profitably manured. Vast quantities of valuable material for making manure might be saved by throwing obstructions across the bottoms and small branches, to catch, at particular places, the vegetable matter and alluviums that are carried down in times of hard rains. The manure made by sheep and swine is as valuable as that made by the cow; yet there is not one farmer in an hundred that makes any manure from them.

We plant too much. Every man should resolve not to plant a line of corn unless he manures it; for one acre well planted and well cultivated, will make twice as much as an acre of the same quality of land badly planted and half cultivated; and a little manure will treble the products.

Every planter should have a meadow or pasture ground, so situated that his plow horses may feed upon it at night. I have ascertained that a plow horse will do better when he can have pasture every night, with two-thirds food, than he will do kept up all the time with corn without allowance. With this pasture we can do with one half of the corn; for when the horse is not at work he can do without any corn.

Too little attention is paid by planters in this State, to the character of their soils in planting their crops. Upon every plantation there is some portion better adapted for cotton than others. Such fields or spots of land should be reserved exclusively for cotton; alternating them with crops of small grain instead of with cotton, corn and then small grain. The same course should be observed with lands favorable to corn. Land should never be planted two years in succession in cotton, unless they are level lands, which should always be taken into consideration in setting apart particular fields for cotton. The surface of the cotton field being bare all winter and summer, it is much more subject to be washed by hard rains than if in corn.

There being but little forest and no swamp land, it has become very costly to raise pork. To superscede the necessity of feeding so much corn to hogs, I would advise the sowing of rye and oats for them in winter and spring; and as an additional substitute, I would recommend every corner of fence that is permanent upon

the plantation, to be set with the plum, peach and apple tree, which, if judiciously selected, would furnish food for your hogs from May until November.

Upon most of our plantations timber for fencing has become scarce, and where it is plenty it is inconvenient. The repair of our fencing has become one of the most laborious duties in our agricultural labors. The time that intervenes between the laying by and gathering of the crop, and between the gathering and the planting, which we should appropriate to the collection and making of manure, is devoted to the repair of fences. It has become to us highly desirable to adopt some system that will save labor in this department of our business. From a suggestion in the Cultivator, I am satisfied that a great deal of labor can be saved by ditching. The time employed in cutting, mauling and hauling rails to the places where wanted, would make ditches which would be permanent, and require no repairs upon our descending grounds, as the rains would keep them from filling up. Ditches, with the embankments made with the earth taken from them, with half the rails around, would make a fence that would answer as good a purpose as the best of fences, made in the usual manner.

I would suggest to every farmer the value of agricultural memorandums—such as a note of the time and manner of planting different fields; the quantities of manure applied; the character of the seasons, and their productions. Independent of the pleasure which we will derive from it as a paper of reference in after times, it will constitute a sort of agricultural thermometer, that will tell us at the close of each year, the progress we have made in the great work of renovating our soils.

Before we can make much progress in agricultural improvement, I consider it of primary importance to create in the mind of the landholder, an attachment to the soil upon which he lives. The plan which I propose for its attainment, has been suggested by an act which you will find in your own statute book. The member who introduced that measure is deserving of the highest commendation, and the act itself will be considered, in all time to come, as the brightest spot in the legislation of the State. I allude to the act which exempts from sheriff's, sale, the mansion house of the debtor and 20 acres of land. I unhesitatingly recommend to the agricultural class, a law exempting from sale all the lands of the debtor connected with his mansion, provided it does not exceed five hundred acres. To make it prospective, will remove all constitutional objections. You need not shrink back, startled at the boldness of the proposition. It will be the law of the State within a short period of time. It will receive a cheering response from every landholder in the State. The professional politician, who is always upon the watch for the popular current, will embrace it, and it will carry him into power. It is a cord that will vibrate pleasantly upon the feelings of every husband and father; it will smoothe their dying pillows, for the widow and orphan will have a home! It is a constitutional and inherent feeling of every man to desire a home; it is his constant aspiration. Who has not heard the song, "Home, Sweet Home," and not felt electrified at the truth and beauty of the sentiment, "Though ever so humble there is no place like home?" What would so effectually attach men to their lands, as the reflection that they have a home, a permanent home, a home that no vicissitudes can take from them; a home in old age; and, above all, a home for their destitute widows and helpless orphans? These considerations cannot fail to give them, hallowed as they are, an increased endearment that they never possessed before. In a political point of view this measure is deserving the most favorable consideration of the statesman. It will effectually arrest the decay of population, and we should no longer see the tide of population rolling out of our borders; it will invigorate and stimulate the arm of industry. The poor man of every pursuit will be encouraged to increased industry and economy, to procure the comforts of a permanent home. It will bring into action every motive and inducement that can prompt men to beautify their homes and fertilize their lands.

It is the labor of the husbandman that fills the granaries from which all are fed. Depress his business, and the hammer of the mechanic becomes silent for the want of employment; the machinery of the manufacturer ceases from its labors; and the sails of commerce are no longer unfurled to the breeze, but idly flap at their moorings. The manufacturer works short time, and no serious inconvenience is felt by society; but let agriculture cease from her labors and what would be the consequence? Industry would stagnate in all its branches; society would be overwhelmed with the distress of famine, and dessolation would overspread the land.

Judge Buel, in an address delivered before the Agricultural Society of New Jersey, expresses in beautiful and admirable style, the influence which agriculture exercises upon the political institutions of every country:—"I need not remind this enlightened assembly of the important bearing which the condition of our agriculture, and our agricultural societies, have and ever must have upon our political destinies.—The farmers of our country will be the last class to be corrupted by the smiles and blandishments of power; the last class to part with republican habits, to degenerate under the baneful and enervating influence of extravagance, dissipation and fashion. The higher the condition of agricultural improvement, the greater will be the intelligence and independence of the agriculturist, and the stronger his inclination and influence in perpetrating the virtues of our revolutionary fathers, and in maintaining in their purity the institutions which they established, and in defending them, if need be, from foreign and domestic foes. Cherish their interest above all others; enlighten it, encourage it, honor and reward it, for it is the palladium of our freedom."

All must acquiesce in the correctness of these sentiments. Their truth is established by the history of every state of ancient and modern times. We all admire and adore our form of government—it is the perfection of human wisdom—we cannot improve it; but every patriot is anxious for its perpetual preservation. American citizens should keep fresh in their recollections, the opinion of the philosophic historian, that there was a point of elevation beyond which States could never go, and that when they reached that point, they could not remain stationary, but began to decline until they were finally blotted from the catalogue of nations.—The history of States would seem to establish the truth of the historian's opinion. How mortifying to the patriot and statesman! All the republics and kingdoms of ancient times have passed away. "Where are their cloud caped towers, their gorgeous palaces?" Science and the arts are important to preserve them. No one can now tell the spot where Demosthenes poured forth the thunders of his eloquence, to awaken his countrymen to a sense of their danger from the usurpations of Philip. Where is the Senate and the Forum, where Cicero so repeatedly, in strains of matchless eloquence, addressed his enraptured countrymen. Many of the states of Europe are manifestly upon the decline. Spain is nearly consumed by those internal fires that have been kindled and kept constantly burning by the collision of her domestic factions. France, after the battle of Waterloo, but for the jealousy of neighboring States, would have ceased to exist as a nation. History teaches us that science and eloquence, the arts of peace and war, cannot give stability to States; that the popular axiom in politics, that "intelligence is the life of liberty," is not entirely true, if we are to understand from it, that it can establish and preserve free institutions. It is an important auxiliary, but there is another element more necessary to the preservation of the public liberty than intelligence—it is public virtue. I do not mean public virtue as taught by some of the schools, but virtue founded on that perfect and sublimated morality first proclaimed from Mount Sinai, and afterwards taught by the illiterate fisherman. Public virtue is particularly necessary to give stability to free institutions. In popular governments, where every citizen participates in its administration, each should possess the qualification necessary for the performance of this high privilege—each citizen should be intelligent, moral and independent.

You will never witness the mortifying spectacle at your elections, of seeing the unprincipled demagogue dragging up to the polls the independent land holder. If the people of free States are virtuous and independent, they need have no alarm for the elevation or depression of particular parties. Confiding in the truth, the great republican truth, that man is capable of self government, it is immaterial to which political party the people confide its administration. Being virtuous and independent, they will necessarily have faithful and capable agents, who will be hurled from power so soon as they cease to administer it in its purity. Agriculture is particularly favorable to the improvement of these high qualities. The husbandman asks no favor but from his maker; he asks no favor of the government, but the protection of life, liberty and property. Interest makes him the friend of the laws, and to him the most hateful and detestable of all despotisms is in the government where the law is not supreme.

Employment is the great preservative of morals. What gives so much employment to man as agriculture? Where there is plenty of employment there are no paupers, and but little crime. Every thing around the husbandman is calculated to improve and refine his virtuous feeling. He can make every thing in nature subservient to his moral improvement, "from the loud peal of thunder to the chirp of the insect; from the lofty oak to the spear of grass." "He can find tongues in trees, books in murmuring brooks, sermons in stones, and God in every thing." Who can look upon the rich harvest field, without having his thoughts elevated to Heaven? Who can witness the ceaseless return of the seasons, and mark their delightful influence upon the animal and vegetable part of creation, without feeling a sense of gratitude and love for that Being who has been pouring upon his creature, ever since the creation of the world, one continued stream of mercies and blessings. These associations can but refine and purify their affections, and enforce the obligation of that great moral precept, the foundation of all public and private virtue, "love and good will to man."

The want of this great element is signally manifest in the history of the French Revolution. The reader of history, after he closes the last chapter of the French revolution, will involuntarily pause and inquire, why a revolution, kindled through the joint influence of oppression and the spirit of liberty, which progressed so successfully, and promised so much for the liberty and happiness of man, should have terminated so disastrously. It was clearly not for the want of intelligence, civilized refinement, and capacity for war. At its commencement and during its progress, France was the great centre of politeness and refinement; she was illuminating the world with the brilliancy of her discoveries in chemisty and philosophy; the splendor of her military achievements were electrifying and startling all Europe; the great genius of her captain prostrated and leveled mountains, and transferred his legions and munitions of war from kingdom to kingdom, as by magic; he planted his standard in almost every state in Europe, and the French Eagle perched in triumph upon it. History has disclosed the cause without assigning it as the reason. Intoxicated with her success, France declared there was no God! All moral restraints were removed. The virtuous citizen was os-

tracised, and the government of the country devolved upon the sansculotte of the city and town. Atheism let loose upon society all the bad passions of the human heart; avarice, lust, revenge, envy, malice and cruelty, riotted upon the lives, property, rights and liberties of her people.—The streets of Paris become slipery with the blood of her people. Humanity and reason stood aghast, intimidated and silenced by the fierce cry of the infuriated populace. Thus we have seen a revolution, the most remarkable in modern times, for the want of this great preservative element, public virtue, terminating without accomplishing any thing for the amelioration of man. In fact, the example of the French revolution has been a drag-chain upon the spirit of liberty, and has thrown back for a century, the march of free and popular institutions.

I cannot permit the occasion to pass without adverting to an incident in the American revolution, that illustrates the strong attachment which the possession of a home gives to independence and freedom. At the darkest hour of the American revolution, when every patriot was almost despairing, the British General issued the proclamation, offering freedom and protection to all those who would come forward and subscribe the declaration of allegience, a person familiar with the scenes of those days says, "That even members of Congress, men of worth and influence, many who had held office, in despair gave up and subscribed the declaration; but that the men in the middle classes stood firm. And who constituted that middle class that stood firm in that eventful and trying crisis? They were mostly the small landholders!'

It then becomes the highest duty of the State to offer any inducement for the occupation and improvement of the soil; to make, if practicable, every citizen a landholder; for if ever the political institutions of this country are placed in jeopardy and peril by an enemy, either foreign or domestic, the great mass of landholders will be the first to rally to their rescue, and the last to abandon them.

Prevention of Smut in Wheat.—At a late agricultural meeting in Sussex, Eng., John Ellman, Esq. related the following account of an experiment in preventing smut in wheat. He took four sacks of smutty wheat, sowed one sack of it with brine only, as strong as he always made it, to bear an egg as large as a shilling; he sowed another with lime only; he sowed the third sack with brine, strong enough to bear an egg, and then let it lay in lime all night; and the fourth he sowed without any thing.—The result was as follows: where the brine only was used, every now and then there was a smutty ear, still not many; where the lime only was used, there was much about the same quantity of smut: where the lime and brine was used, there could not be found a single smutty ear; and where nothing was used it was a mass of smut.

Useful Recipe.—I send you below, Messrs. Editors, a receipt for making a composition which will render wood entirely incombustible. It is very simply prepared, and quite easy of application, being used the same as paint with an ordinary brush. A good coat of it applied to the floor under the stoves would be an excellent precaution.

Take a quantity of water, proportioned to the surface of wood you may wish to cover, and add to it as much potash as can be dissolved therein. When the water will dissolve no more potash, stir into the solution, first a quantity of flour paste of the consistency of common painter's size; second, a sufficiency of pure clay to render it of the consistency of cream.

When the clay is well mixed, apply the preparation as before directed to the wood; it will secure it from the action of both fire and rain. In a most violent fire, wood thus saturated may be carbonated but will never blaze.

If desirable, a most agreeable color can be given to the preparation by adding a small quantity of red or yellow ochre.—*Buffalo Com. Adv.*

From the New Genesee Farmer.

RESULTS OF EXPERIMENTS—SCIENTIFIC FARMING.

The following statements, from the N. York Tribune, afford a good illustration of the importance of scientific experiments in agriculture, and the necessity there is that Experimental Farms should be instituted for the purpose. In relation to the experiment with lime and charcoal, it is important that the previous character of the soil should be accurately understood; for on some soils these substances would be of very little use. It is also important for us to know what is the difference in effect between the oyster shell lime and common stone lime. We apprehend it is not great.

"We remember to have been much struck at the recent exhibition at Niblo's, under the auspices of the American Institute, with the remarkably fine specimens of cereal grains and of garden vegetables, from the farm of Mr. Pell, and can now understand their marked superiority.

"At a meeting of the Farmers' Club, Mr. Meigs stated that Mr. Pell, of Ulster county, made a statement at the Repository relative to his experimental farming, from which it appeared that he found benefit from the use of oyster shell lime, using 300 bushels per acre. That in addition he had employed 25 bushels of charcoal per acre. That on this charcoal dressing he obtained, last summer, *seventy-eight bushels and twenty-four quarts of wheat per acre.* That he had 20,000 apple trees in full bearing. That in dry weather he had applied lime freely at the roots—found that this preserved the verdue and growth, when the neighborhood was much injured by drought. That he had cut wheat two or three weeks sooner than his neighbors; and when the root of the straw began to turn brown, and when, by the pressure of the finger and thumb on the grain, the milk would fly out.—That this wheat weighed 64 pounds per bushel. That he sold it for seed at $1, when ordinary wheat was 87½ cents. That he cut clover and housed it on the same day—sprinkling about a bushel of salt over every load. That this clover retained its green color, and was preferred by cattle to that saved the old way. That he dipped a sponge in ammonia, and applied it to the worm nests on his trees, and banished them completely. That he has sent 4000 barrels of apples to market, many of which go to London, and there sell for $9 per barrel. That he employed a man from Vermont to engraft 10,000 apple trees, for $150; that this man brought a company of men, of whom two sawed off the proper limbs, two made the proper incisions (two of them) in the branch, two more inserted the grafts, two more applied a compost of wax, tallow and rosin. That out of the 20,000 grafts not one failed."

Since the foregoing was in type, we found the following in the Albany Cultivator:

"EXPERIMENT WITH CHARCOAL.

"*Messrs. Editors*—I mentioned to you last spring, that I had sown 52 bushels of charcoal dust to the acre, on wheat, and would give you the result of the experiment. In order that my promise might be fulfilled, I selected a corner of a 25 acre field of wheat, containing by survey two rods. The grain was harvested while in the milk, on the 17th of July; thrashed, cleaned, and measured on the 21st, yielding 31 quarts and 1 pint, or 78 bushels and 24 quarts to the acre. As the above fact may appear incredible to many wheat growers, I enclose the survey, and certificates of two of my men, who measured it.

"I have grown cuttings of the Camelia japonica, soft wooded geranimus, cactus, wax plants, &c., in pure charcoal dust, without any admixture of earth; likewise corn, beet, carrot, and other seeds, and believe it to be the most valuable substance now known as a manure, being pure, incorruptible and lasting.

"Yours respectfully,

Robt. L. Pell.

"*Pelham, Ulster, Co., Nov.* 20, 1843."

"I, M. W. Powell, surveyor, hereby certify that I have measured the ground herein described, beginning at an apple tree, and running a northwest course 95 links, thence a southwest course 50 links, thence east 30 links to a line to the north angle, thence east 70 links to the place of beginning; the line from the base to the north angle being 26 links, containing 2 rods, which is a portion of R. L. Pell's wheat lot No. 2.

M. W. Powell.

Affirmed before me, on the 15th day of July, 1843. M. M. Keller, J. P.

We, Patrick Farrell and Leonard Latten, hereby certify that we gathered, thrashed, cleaned and measured the wheat grown on the above described two rods of ground, belonging to Robert L. Pell, Esq., of Pelham, Ulster Co., and the yield was 31 quarts and 1 pint, dry measure: we believe if the gleanings had been threshed, there would have been one bushel.

Patrick Farrell,
Leonard Latten.

From the Farmers Monthly Visitor.

Qualifications of Farmers' Wives.—A writer in the Visitor for May, speaks of the great importance of females, especially the wives of farmers, being acquainted with all the duties of a domestic kind, and bestows high encomiums upon her "who rises with the lark," prepares suitable food for her family, &c. My opinion perfectly coincides with his as to the importance of a farmer's wife knowing, superintending and assisting in her domestic duties, so that every thing be done as it should be. Yes: I would praise her for her skill in preparing the hot cakes and early breakfast. Yet I would contend for the superiority of her who, with neatness and skill performs her routine of domestic duties with alacrity, in order to spend a few hours in useful reading, that she may impart light and knowledge to those around her, thereby enriching her own mind, and the minds of her children, so that they may become useful members of society.

Time is making vast ravages among those who take an active interest in the welfare of our country. Who are to take their places? Shall we look for them in our large cities? Do not many of their young men live in idleness and dissipation? Are they accustomed to that close application to study and business which is necessary to discipline their minds and fit them for important places in government? Where, I say, are we to look for our future legislators and statesmen, but among the sons of our honest yeomen?

And does not the formation of their minds depend upon their mothers? Are not the first impressions the strongest and most lasting?—And are not those received from the mother? Is not the child taught the love of good and evil, and the love of God and his country, from his mother? Does he not imbibe her sentiments and feelings with the first dawnings of reason? How important, then, that she be intelligent, and that her sentiments be correct and her judgment good.

The business of farmers require constant attention through the busy seasons of the year; they have but little leisure for intellectual pursuits, or instruction of their children, and the wife who spends some portion of her time in useful reading, and imparting the information thereby gained to those around her, does abundantly more benefit her family, than she could possibly do in raking hay or picking potatoes. We are craatures of imitation—monkey-like. If a child sees his mother take a book, he likewise will take one. If she speaks of what she reads, he will likewise, and so imprint it on his memory. The influence of such a woman is great. It will be felt around her, and it will tell upon a generation yet unborn.

Women possess quicker sensibilities and finer feelings than men, and they have more leisure for improvement. Let them improve their time to the best advantage, and we shall have an intelligent community.

A man's mind is not very likely to expand or

be elevated, whose wife can talk of nothing but feeding the ducks and chickens, though the ducks and chickens *should* be fed, and fed *often*, too. ACCA.

A WIFE WORTH HAVING.—We were favored a few weeks ago with an interview with Mr. Harvey Ford, of Winchester, Litchfield county, who called in to pay his subscription for the fourth volume of the Farmer's Gazette. Mr. Ford's farm lies principally in the town of Goshen, and like most of his townsmen, he is a thorough-bred dairy-man, and employed in producing the famous Butter and Cheese, which has acquired such an enviable name all over the land.* His operations in this are not so extensive as many of his neighbors, he keeping only on an average twenty cows; but the products of his dairy are of the best quality, and always demand the highest price in the market.—The first premium on Cheese was awarded to him by the Hartford County Agricultural Society in 1842.

Feeling highly gratified with the opportunity of an interview with an intelligent farmer from that section of our State, we exercised our Yankee prerogative, and asked Mr. Ford a great many questions in relation to his business. We ascertained that he had occupied his farm about sixteen years, during which time his energies had been directed chiefly to the single object of producing a first rate article of butter and cheese; these richest of all the products of agricultural labor. Among other things, we asked him what quantity of these delicious articles his farm produced annually, and how much he usually laid out for labor, &c. From the answer we learned that Mrs. Ford had performed almost the entire labor with her own hands, and that Mr. F. had a regular account at home of the quantity made each year, the price for which they were sold, &c. At our solicitation he promised to send us a correct statement of his books.—Prompt in the fulfilment of his engagement, we received from him, a few days since, a written statement from which we copy as follows:—

108,807 pounds of butter and cheese, exclusive of what was used in the family, and some sold to families of which no account is given, made by one woman, (Mrs. Ford,) during a term of sixteen years past—except a very small proportion made by others during short intervals while she was absent or out of health. The amount of money for which these articles were sold, was $8,340 80. This is an average of 6,800½ pounds of butter and cheese per year, selling for $521,30; and all made by the hands of one woman.

Such a wife is an invaluable treasure to her husband. What would some of our modern fine ladies say to this? What would the *fashionable* Miss think, if told on her bridal eve that she would be required during the next sixteen years to manufacture 7,000 pounds of butter and cheese every summer! If told that instead of spending all her husbands money for silks and laces and trumpery, to enable her to make a great *bustle* in a ball room or at a fashionable watering place, she would be expected by her own industry to add $500 a year to the wealth of the family, how would her delicate hands be raised in horror at the thought! And yet our word for it, Mrs. F. has been a happier woman for 16 years past, than the most tightly laced and profusely bustled dandisette who promenades Broadway or Chapel street. We are almost inclined to read a homily on female education—but it would be out of our appropriate sphere.—*Conn. Far. Gaz.*

* The "Goshen Butter," which has acquired such a high reputation, we rather think is made in Goshen, Orange county, N. Y. We suspect there must be some mistake in the statement above.—[*Eds. Chron. & Sent.*]

OIL DESTRUCTIVE TO PLUM TREES.—Mr. David Tomlinson, of Schenectady, informs us that two of his neighbors lost quite a number of valuable plum trees the past year, by applying oil to caterpillers in the spring, to destroy them, as they had seen recommended in some publication.—*American Agriculturist.*

EQUIVALENT OF VARIOUS PLANTS TO HAY, &c.—We find the followidg table of equivalents in Smith's translation of Burgher's Economy of Farming:

100 lbs of good hay are equal to
90 lbs of clover hay, made when fully blossed.
98 lbs of do. made before it blossomed.
98 of do. second crop.
98 lucerne hay.
89 sainfoin do.
410 green clover.
467 vetches or tares, green.
275 green Indian corn.
374 wheat straw.
254 rye straw.
164 oat straw.
353 pea stalk.
201 raw potatoes.
175 boiled do.
339 mangel wurtzel.
504 English Turneps.
276 carrots.
308 ruta baga.
54 rye, (grain off.)
46 wheat, do.
59 oats, do.
64 buckwheat, do.
57 Indian corn, do.
45 peas.
55 beans.
60 horse chesnuts.
68 acorns.
62 sunflower seed.
69 linseed cake.
105 wheat bran.
109 rye bran.
167 wheat and oat chaff.
179 rye and barley chaff.

An ox requires 2 per cent of his weight in hay per day; if he works, 2½ per cent. A milch cow, 3 per cent. A fattening ox, 5 per cent at first, 4 per cent when half fat and afterwards. Sheep, when grown, 3½ per cent of their live weight in hay per day.

SUCCEISFUL CORN CULTURE.—We subjoin a short communication made to the Central N. Y. Farmer, giving a very pleasing account of the yield of an acre of corn in Oneida county, N. Y. We say pleasing, because neither the quantity of manure applied nor labor bestowed were large. We call attention to the *manner* of preparing the land and applying the manure, because we believe that the success of the crop was owing in a great measure to the circumstances of deep plowing and a division of the manure between the subverted and surface soils. We can the more readily incline to this opinion, as there was nothing very extraordinary in the *quantity* of manure applied, nor in the amount of labor bestowed to the after culture of the corn.—*American Farmer.*

Gentlemen—On the farm on which I reside, (belonging to S. Dakin, Esq.,) we cultivated the present season, one acre of corn. The land had lain in grass for many years, and for several of the last had produced but a light crop.—In the spring of 1842, it was plowed up, and received about fifteen loads of manure, and planted with potatoes—the crop only a moderate one. The last spring the piece was plowed twice, as deep as could be done conveniently, and previous to the last plowing, received twenty to twenty-two loads of long manure—the precise number I cannot state as no memorandum was made at the time. After the plowing, eight loads of compost manure were spread on the surface, and the piece harrowed and marked three feet apart each way—and planted the 19th day of May with the common large eight rowed corn, steeped in saltpetre water, and dried in time. It was hoed twice, which kept the ground tolerably free from weeds as it was kept clean the year before. It was harvested on the 19th of September, cut up at the ground and put in shocks, and husked in about ten days afterwards. The product was 182 bushels of ears, equal, as usually calculated to 91 bushels of shelled corn. Cost in labor, 28¼ cents per bushel.

Last season we cultivated something more than double the quantity of land, naturally the same kind of soil, but which had been many years under the plow, and lightly manured, and obtained 200 bushels of ears, which cost 47½ cents per bushel of shelled corn.

CYRUS INGALLS.

FALSE ESTIMATION OF AGRICULTURE.—The first obstacle in the way of agricultural improvement, is the low estimate which has been put upon this calling. It has too often been regarded as an employment that requires nothing but physical power—mere brute force; and consequently, if a young man exhibited any considerable degree of talent, he must be put to some other calling. The natural tendency of this has been, to degrade agricultural labor, and to impress upon those who had any aspirations after distinction, the impolicy of groveling in the dust, as cultivating the soil has sometimes been regarded. The effect of this has been to draw talent away from agriculture, and to create an impression that the calling was not as respectable as some others. Many a young man has been driven from agriculture, and brought to ruin by this cause. And if it were not ungallant, I would say that some of our young women, faultless in every thing else, have been so far deceived as to prefer a husband employed in other pursuits than agriculture. But the reverses which have attended other pursuits, will, I trust, soon teach them, that the permanent home of the farmer's wife is greatly to be preferred to the changing abode and variable fortune of many other classes of our citizens. * * * * Agriculture is no mean employment. It was the first into which our race entered, and it is the last which can be abandoned. It has commanded the attention of some of the wisest and best men of ancient and modern times. Cincinnatus, renowned in war, was not ashamed to follow the plow; and the estimate which posterity has put upon his worth is such, that the *farmer* has thrown the *general* into the shade. And in our own country, to mention but one example, the Farmer of Mount Vernon was the Father of his Country. Who, then, would disdain a calling pursued by the wise and the good—a calling essential to the well-being of society, conducive to public virtue, promotive of health and happiness, and one to which Washington was proud to retire, from one of the highest stations ever conferred on man. But modern discoveries have made agriculture more attractive than formerly. Now the application of science renders it an *intellectual* employment; so that the laborer may improve his mind while improving his soil, and cultivate his heart as well as his farm.—*Correspondent of N. E. Farmer.*

THE PEACH.—With the fertile soil of our country, we have but little difficulty in growing peach trees until they are three or four years old, when they are attacked by the worm in the root, or a disease called the yellow, and frequently by both. In either case the tree dies in two or three years.

The following remedies have been found perfectly successful in preventing the worm in the root: When a tree is first set out in the orchard, apply three quarts of fresh or unleached wood ashes, and add ashes every spring: Another method is to pour chamber-lye around the roots of the trees several times during the spring and summer.

The method pursued by Mr. Pell, of Pelham, Ulster county, N. Y., is to put one half peck of fine charcoal to the roots of each tree when first set out in the orchard, and adding a quantity each spring.—*B. G. Boswell, Philadelphia.*

HOW TO HAVE A SHARP RAZOR.—Take a strop of thick harness leather, the size you want for a strop and fasten it at each end upon a piece of wood, then rub upon its surface a piece of tin, (any tin dish will do,) until it is smooth.—Strop your razor upon this, and you will find it worth all the patent strops that were ever invented.—*Selected.*

WEDNESDAY, FEBRUARY 7, 1844.

THE BACK VOLUME.

All new subscribers who may desire it, can obtain the first volume, neatly bound in boards, at one dollar the volume.

SEND IN YOUR LISTS.

As it is very important in regulating our edition to know what number of subscribers will probably be obtained, we beg our friends to send in their lists at the earliest possible day.

PLOWING.—In welcoming "*Georgian*" to our columns as a contributor, we cannot omit to invite the reader's attention to his article on plowing, which will be found in this number. There is no portion of agricultural industry requiring greater attention and care than the manner in which the plowman discharges his duty, and yet we believe that few, very few, of our planters regard it of sufficient importance to bestow that attention so necessary to its proper execution. To all those, therefore, who think it of little consequence whether their lands be well or imperfectly plowed, we commend the remarks of "Georgian;" nor indeed are there any portion of our planters who may not be benefited by the learning and practical observations of such a writer, who, we sincerely hope, may continue to enrich our columns with his views upon all subjects pertaining to agriculture.

OBSERVATIONS ON SWEET POTATOES.—I have observed in using my potatoes out of the hill or bank, that those in the north side of the hill had sweated the most, the east and west sides did not sweat quite so much, while the south side was perfectly dry, and much more rotten than any other portion of the hill.

Now for my mode in putting the potatoes in the hill: In the first place, I excavate to the clay or subsoil, in a concave form; I then place pine bark so as to cover the bottom of my excavation, with the outside of the bark upwards; I then fill up with potatoes until the hill, which is about five feet in diameter at the surface, is about two feet above the surface; then cover the potatoes with pine bark, taking care to put the inside of the bark next to the potatoes; out side of the bark I place a layer of crop grass, and then cover up the hill, three or four inches thick, with dirt, leaving a hole at the top of the hill sufficiently large as a ventilator, say six or eight inches in diameter. Generally my potatoes keep tolerably well.

This is one mode: now for another which I have sometimes tried. In the first place, I throw up the dirt so as to raise an embankment some six inches high, then cover with pine bark, and go through the same process as with the hill above. In putting my potatoes away in this manner they dry rot, and I cannot succeed. My object is now to cause my potatoes to sweat on the south side of the hill, and then there is no difficulty in keeping them sound.

Will you, through some of your correspondents, inform me upon this subject. My own opinion is, when the potatoes are placed in the hill they should be made entirely wet before hand, or after being put in the hill, by pouring water on them.

If I have missed the mode of putting up potatoes, I hope to be informed through the columns of the Southern Cultivator.

Yours, &c. J. W. MOODY.

Locust Grove, Ga., Jan. 15, 1844.

Remarks by the Editor.—We acknowledge ourself quite at a loss to account satisfactorily for the causes which produce the difference noticed by Mr. Moody, in the different sides of his heap. Nor, indeed, would we be justified in entering into a disquisition, without more data upon which to base the argument for any opinion we might entertain. We incline to the opinion, however, that either excavating or embanking for the location of a heap is not so desirable, or so apt to secure the potatoes, as placing them on the surface of the ground. This is a very important subject to all planters at the south, and with a view to have all the information possible, we last spring opened our columns to its discussion, which elicited several interesting communications from different gentlemen, containing their mode of saving potatoes, to which we beg leave to refer Mr. Moody, at pages 71, 81 and 95 of the first volume of the "Southern Cultivator," as also one or more articles on the same subject, which were copied from some of our exchange papers.

THE CULTIVATOR.—The reception from the editors, of the London "*Pictorial Times*," for December, has served to remind us that we have heretofore omitted to notice the change in the form of publication of this most excellent agricultural journal. With the new year it doned an entire new dress, and instead of the quarto form in which it has won so many laurels, it appears now in a large octavo of 32 pages, monthly. It is now, therefore, one of the handsomest (it has always been one of the ablest) agricultural papers we have the pleasure of reading.

CORN STALK SUGAR.

The following letter of Mr. Webb, which was read at the meeting of the Agricultural Society of New Castle County, Delaware, in September last, is highly interesting; the more so as it gives the result of an actual experiment in the culture of corn stalk sugar. The production of 3 tons of fodder, 500 lbs. of sugar and 50 gallons of molasses, from one acre of land, and that too by one not a regular sugar planter, versed in all the minutiæ of the business of grinding, boiling and granulating, is in the highest degree satisfactory, and, we doubt not, will encourage others to embark in making the experiment of raising sugar from corn stalks.—The enterprise is yet in its infancy, and it is reasonable to suppose that, as it advances, the spirit of improvement will simplify the whole process, so as to enable the planters generally to raise a large portion at least of the sugar consumed in their families. Nor will it stop here; for if subsequent experiments should prove that the cultivation is profitable, the sugar equal to that produced from the sugar cane, instead of being large importers of sugar, the U. States will become exporters. The subject is certainly one of importance to our planters, and we hope they will give it a fair test by patient investigation.

The American Farmer introduces the letter of Mr. Webb with the following remarks: —"We shall direct the reader's attention to to the following letter from Mr. William Webb, upon a subject of growing interest to the agricultural community. We say growing interest, because we find that the ball set in motion by Mr. Webb, is rolling onward over hill and dale throughout our land; and we do hope, and that before many years, to see the manufacture of sugar from cornstalks made a branch of the *economy* of every farm—we mean, so far at least, as the *home* consumption of the article of sugar may be concerned. Why, we would ask, should a farmer buy any thing which he can make on his own farm? If then, by devoting an acre of ground to the culture of corn, to be manufactured into sugar, he can secure a supply of sweetening for his family, why should he not do so, and thus save so much annual outlay? The *saving* of the money expended for this single item alone, would, in a life time, amount to a very handsome outfit for either a son or daughter on commencing house-keeping. And by the way, it should be the object of all farmers and planters, to keep these truths constantly in view—that true economy consists in, selling more than you buy; buying nothing which you can make at a less cost than you can purchase it; buying nothing that you have no use for, no matter how cheap it may be; saveing wherever you can do so, without resorting to meanness; and taking care of whatever you may have earned or possess. But as we did not intend to read a *homily*, but merely to introduce Mr. Webb's letter, we will quit sermonizing, and present to our readers the letter itself. Here it is:"

WILMINGTON, Sept. 13, 1843.

To Dr. W. Thomson, President of the New Castle County Agricultural Society:

Dear Sir—Since my last communication to you on the subject of manufacturing sugar from corn, a sufficient time has elapsed to bring the ideas then advanced to the test of experiment. This has been done to a considerable extent by many individuals in different parts of the country; the results (so far as known) have confirmed every reasonable expectation, and given confidence to all interested in a successful issue.

Notwithstanding the disappointments and failure necessarily attendant on all new enterprises, enough has been developed by the efforts of experimenters to show beyond a doubt that this manufacture can be profitably carried on.

If any one skeptical on this subject, will take the trouble to chew the pith of a corn stalk which has ripened without producing grain, his doubts will vanish. Indian corn and sugar cane belong to the same family of plants, and offer many points of resemblance. The saccharine matter found in their stalks, is exhausted by the process of vegetation in the formation of seed; and the sugar cane will no more yield sugar after it has perfected its seed, than will corn under the same circumstances. From analogy then, we must conclude, that the plant most productive in seed, will be most productive in sugar. This plant is Indian corn. That such a result has not yet been fully confirmed by experiment, is no proof of its incorrectness. The best mode of preventing the formation of grain upon the

plant is not yet understood. The plan hitherto practised, of taking off the young ear is as objectionable as injurious to the stalk. From some trials made the present season, it is believed that taking off the tassel will be found effectual in securing the object. Let the corn be cultivated at such distances (according to the quality of the land) as will grow the stalk about an inch in diameter.

As soon as the tassel appears sufficiently to be taken hold of with the hand, it should be pulled out; this operation does not injure the stalk in any perceptible degree.

But without anticipating improvements we will give a calculation from the results which have been actually obtained. In the first place, the fodder is at least equal in value to a crop of the best timothy hay. No green food which can be raised on a farm, is to be compared to it for increasing the milk of cows. It may be preserved for winter use to great advantage, by packing it, when partially cured, alternately with layers of any straw. If properly saved, this part of the crop will pay all expenses. We last season obtained from one acre between six and seven hundred gallons of juice. This quantity if properly manufactured, will make at least five hundred pounds of sugar and fifty gallons of molasses. The estimate then for one acre will stand thus:

	Dr.
To ploughing and harrowing	$2 50
2 bushels of seed and boiling	2 00
Cultivating	4 00
Taking off ears	5 00
Cutting up, grinding, saving fodder, &c.	17 50
Wood	5 00
	$36 00
	Cr.
By 3 tons fodder, at $12 per ton	$36 00
500 lbs. sugar, at 6 cents	30 00
50 gals. molasses at 30 cents	15 00
Stalks after grinding	4 00
Ears taken off	1 00
	86 00
	36 00
Balance	$50 00

Our operations, the present season, are not yet sufficiently matured to furnish any further observations.

I am respectfully yours,
WILLIAM WEBB.

NORTH CAROLINA TEA.—A communication appeared in the Richmond Enquirer a short time since, on the culture of Tea, from the China seed, in Grenville county, N. C. It was supposed by many at the time to be a hoax, as the writer, a Mr. Newbell Puckett, was not generally known in the county—but a correspondent of the Raleigh Register thus explains matter:

Some business called me to that neighborhood this week, where I met with Mr. Edward Lewis, who informed me that Mr. Puckett was his mother's overseer; and that the letter to the editor of the Richmond Enquirer was no hoax. The fact that Mr. P. came to this state last winter, and has occupied an humble, but respectable station in life, satisfactorily accounts for the limited acquaintance which the neighborhood has with him. At the request of Mr. Lewis, Mr. Robert Eaton and myself visited his mother, the lady in whose service Mr. Puckett is now employed. He states that an acquaintance of his found some seed in a paper of tea, and planted them in a flower box. They vegetated, and the seed of the plant matured in the fall; and were sown the following spring, and cultivated with success. Mr. P. brought some of these seeds with him to this State, and divided them with his employer, Mrs. Lewis. From these, which they sowed last spring, they raised about half a gallon of seed. Mrs. Lewis favored us with some of the tea, prepared in the usual way, and, in flavor, it very much resembles the foreign tea. By comparing the pods, leaves and stalks, with cuts or plates of the Chinese tea-plants, found in encyclopedias and gazetteers, you may perceive a striking similarity. If this should prove to be the genuine article, and can be successfully cultivated in the United States, it may not only keep in circulation among us thousands of dollars, which would otherwise be transported to a foreign land, but will place a pleasant and nutrative beverage in the hands of every cottager.

Yours, most respectfully,
L. K. WILLIE.

Oxford, Jan. 10, 1844.

PLANTERS' CLUB OF HANCOCK.

The Annual Fair of the Planters' Club of Hancock, will take place at Sparta, on Friday and Saturday, the 1st and 2d of November next, when the following premiums and honors will be awarded:

For the best acre of upland corn, a silver cup, value $10 00
second best 5 00
third " 3 00
fourth and fifth, do. Honors.
best acre of low ground corn 5 00
second do do 3 00
third do do 2 00
fourth and fifth do. Honors.
best acre of wheat, on upland, a silver cup, value 10 00
second best, a premium of 5 00
third do do 3 00
fourth and fifth, Honors.
best acre of Cotton, on upland, a silver cup, value 10 00
second best, a premium of 5 00
third do do 3 00
fourth and fifth, Honors.
best acre of Oats, a premium of 3 00
second best do 2 00
third, fourth and fifth, Honors.
best acre of Sweet Potatoes 3 00
second best 2 00
third, fourth and fifth, Honors.
best acre of Turneps 3 00
second best 2 00
third, fourth and fifth, Honors.

By a rule of the Club, competitors for premiums on crops, will be required to give the modus operandi of culture, the quantity and quality of manure applied, and evidence that the land reported on contained a full acre, and crop accurately measured.

For the best Jack, a premium of $5 00
second best 3 00
best Georgia raised Mule 3 00
second best 2 00
best Mule Colt 3 00
second best 2 00
best Stallion of 4 years or upward, ... 5 00
second best 3 00
third, fourth and fifth best, Honors.
best 3 year old Colt or Filly 3 00
second best 2 00
third, fourth and fifth best, Honors.
best 2 year old Colt or Filly 2 00
second best 1 00
third, fourth and fifth best, Honors.
best brood Mare, with or without a colt 5 00
second best 2 00
third, fourth and fifth best, Honors.
best Bull 3 00
second best 2 00
third, fourth and fifth best, Honors.
best 2 year old Bull 2 00
second best 1 00
third, fourth and fifth best, Honors.
Cow producing the largest quantity of milk, without regard to blood 5 00
second best 3 00
third best 1 00
fourth and fifth best, Honors.
best Milch Cow 3 00
second best 2 00
third, fourth and fifth best, Honors.
best 2 year old Heifer 2 00
second best 1 00
third, fourth and fifth best, Honors.
best Ram 2 00
second best 1 00
third, fourth and fifth best, Honors.
best Ewe 2 00
second best 1 00
third, fourth and fifth best, Honors.
best Boar 3 00
second best 2 00
third, fourth and fifth best, Honors.
best Sow 3 00
second best 2 00
third, fourth and fifth best, Honors.
heaviest fat Hog, from 1 to 2 years old, in proportion to age 2 00
second best 1 00
third, fourth and fifth best, Honors.
heaviest Pig, agreeably to age, from 6 to 12 months old 2 00
second best 1 00
third, fourth and fifth best, Honors.
best piece of 8 yards Homespun, for gentlemen's wear 3 00
second best 2 00
third, fourth and fifth best, Honors.
best Counterpane 3 00
second best 2 00
third, fourth and fifth best, Honors.
best piece of 10 y'ds Domestic Silk ... 5 00
second best 3 00
third, fourth and fifth best, Honors.
best article of Negro Clothing 2 00
second best 1 00
third, fourth and fifth best, Honors.
best article of Negro Blanketing, of cotton or wool 2 00
second best 1 00
third, fourth and fifth best, Honors.

The Club has set apart ten dollars, to be awarded by their committees to articles manufactured by ladies, not enumerated in their premium list, such as Capes, Collars, Caps, Pockets, Baskets, or any fancy article made by a lady.
TUTTLE H. AUDAS, Sec'y.

Sparta, January 23, 144.

CURE FOR BURNS.—Burns or scalds may be relieved, and speedily cured, by an application of *ink* and raw cotton, to take out the fire, and a salve of lard and Jamestown weed, to heal the wound. The salve is made by stewing the leaves or seeds of the weed in lard, and straining through any thin cloth. This is an excellent article for sores of any kind. Fresh cuts are soon healed by its use, and if you have a horse with galls or sore back this is a superior remedy. Every family would act wisely to always have the salve in readiness.

ANOTHER.—Another good remedy for burns is a preparation, one part of lard, one part of rosin, and a half part of turpentine, simmered together till all are completelg melted. The burns, with an application, should be washed daily and dressed with fresh ointment.—*Tennessee Agriculturist.*

LOCK-JAW IN A HORSE.—Loraine gives an account of successful treatment for this disease. A mare, from severe treatment, had a violent attack of the lock-jaw, and after it had continued nearly a day, the animal was incapable of rising, and seemed to be in the agonies of death. Dr. Dewes was consulted, who having been informed by Dr. Ruse that he had cured a horse of the lock-jaw by dashing cold water over him, recommended this treatment. Thirty or forty buckets of water were dashed over her head and body with despatch. But little effect was produced, and in about two hours the bathing was repeated, and then the clenching of the jaws was a little relaxed. A third was tried and she bit the grass around her, though unable to swallow it. A fourth enabled her to eat, and the next day she was well, and for three years, the time the account was given, she had been as healthy and active as ever.—*Far. Gazette.*

EFFECTS OF DEEPENING THE SOIL.—The Liverpool Times gives the following fact, illustrating the beneficial effects of loosening the soil to a considerable depth:

"On Saturday last, there were exhibited in the Exchange News Room, two enormous specimens of the red beet, or mangel wurtzel, grown by Mr. Robert Neilson, in a field on his farm at Halewood. Each of them weighed upwards of 20 pounds. They were not merely curiosities in themselves, but remarkable proofs of the effects which may be produced on vegetation by the deepening of the soil, for the ground which produced these gigantic roots, would certainly have produced double the quantity of potatoes, or of turneps, or of ordinary sized beets, usually grown on an equal extent of land. They show that by deepening the soil, an amount of produce may be got from it much greater than any one has yet thought it possible to raise."

GREEN AND DRY WOOD.—A cord of wood whilst green, is said to contain 1443 pounds of water, which would make one hogshead and two barrels Let every farmer who hauls wood to market, remember that when he transports it green, he is carrying that weight and quantity of water on his load, which if he had suffered his wood to remain after it was cut till it was suitably seasoned he might save from the burden of his oxen or horses, or pile upon the top of it three-fourths of a cord of seasoned pine, and yet have no heavier load than the green cord alone weighed.—*Maine Cultivator.*

COTTON IN INDIA.—The following item of news, received by the late arrivals from England, will be interesting to some of our readers; The report of the Bombay Chamber of Commerce, contained in the Indian newspapers, shows that the experiments in growing cotton have been, on the whole, successful. A specimen of Nurma cotton was pronounced to be a very fine, soft, strong, long, and clear-colored staple, which would complete with the very best American short sample cotton, could it be produced in sufficient quantity.

HABITS OF SPIDERS.—The following curious fact is given on the authority of Mr. Spence:—Having placed a large full grown spider on a cane planted upright in the midst of a stream of water, he saw it descend the cane several times and remount when it had reached the surface of the water. Suddenly he altogether lost sight of it, but a few moments afterwards, to his astonishment, perceived it quietly making its way on the other side of the stream. The spider having spun two threads along the cane, had cut one of them, which, carried by the wind, had become attached to some object on the bank, and so served the spider as a bridge across the water. It is supposed that spiders, when adult, always use similar means to cross water.

LOVE OF HOME.—The Irish are often ridiculed, or contemned, for vaunting the comfortable homes they have left behind them. "The Almighty knows," they say, "what we've come here for, we were a dale better off at home!.' This is false in word, but true in feeling. Their earnest affections take possession of their memories, and efface all but that which made the happiness of their birth-place, and childhood's home. There, in perpetual freshness, are the joys of youth; the associations of song and story are there; there, in golden light, all the bright passages of life—its pleasant acquaintanceships, and sparkling incidents. And there, those ministers of suffering, trial, superstition, even death itself, have their root of sorrow plucked out, and become ministering angels, messengers from another world! Who ever looked back upon home, through the vista of time, or the wide spaces of distance, and saw any thing but light and beauty there? Surely, then, the poor Irish may be pardoned the hallucinations of their filial love.

SCALDED MILK FOR BUTTER.—In the Boston Plowman, we notice that Mr. Johnson, of Framingham, scalds his milk during the winter season after drawing it from the cow, and then sets it away in the usual manner. The butter made from the cream is as yellow, sweet, and solid as it made in June. The same things is done by all good butter-makers in this vicinity, with the same effects as detailedby Mr. Johnson.—*American Agriculturist.*

As it is characteristic of great wits to say much in few words, so small wits seem to have the gift of speaking much and saying nothing.

AUGUSTA MARKET.

TUESDAY P. M., February 6.

Cotton—Since our report of the 24th ultimo, which left the market in a very inactive and depressed state, accounts from Liverpool to the 4th January, were received by the steamer at Boston, which show an active market and a slight advance on former prices The effect of this news upon our market was instantaneous, and the rates advanced to the highest point of the season, at which the market continues very firm. We quote 8½ to 9¼ cents as extremes—principal sales 9 to 9¼ cents. Ten cents has been refused for a crop lot in square bags, gined by the Carver gin.

Exchange—Checks on New York, Savannah and Charleston are abundant at par. Central Bank bills 3 @ 4 ℔ cent discount. Georgia 6 ℔ cent Bonds are dull.

CONTENTS OF THIS NUMBER.

	PAGE.
Agr. Address, Eli H. Baxter's, concluded	18
Agriculture, false estimate of	21
Burns, cure for	23
Butter, scalded milk for	24
Corn, successful culture of	21
Cotton in India	24
Farmers' Wives, qualifications of	20
Farming, scientific	20
Hay, equivalent of various plants to	21
Hollow Horn, remedy for	17
Home, love of	24
Lock-jaw, cure for	23
Planters' Club of Hancock, premiums offered by	23
Peach Trees, to destroy worms in the roots of	21
Plowing	17, 22
Plumb Trees, oil destructive to	21
Razor Strap, a cheap	21
Soil, effects of deepening	24
Spiders, habits of	24
Sugar, corn stalk	22
Sweet Potatoes, observations on	22
Tea, North Carolina	23
Wheat, prevention of Smut in	20
Wife worth having	21
Wood, recipe to render incombustible	20
" green and dry	24

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From the Spartan.

Substance of a Speech delivered by Col. E. C. LEITNER, *before the Spartanburg Agricultural Society, at their last Anniversary.*

Gentlemen—In discharging the duty which, by your request, I am now about to undertake, my acknowledgment of inadequacy from the almost entire want of experience in the modus operandi of agriculture, will serve as a sufficient apology for confining my remarks to the great utility of Agricultural Societies. "In union is strength," and be the contemplated accomplishment what it may, union of strength ensures success.

"The greater the force the greater the impression," is a remark as extensive in its applicability as is physical nature itself. Nor does the effect of force exhibit itself in that which is physical alone, but is seen in intellectual efforts also.

Knowledge is not found to be self-existent, but is the result of the exercise of talent; and its increase is always in proportion to the amount of talent exercised, whether it be that of one man, or the concentrated talents of many men. In most instances, however, it is acknowledged, that where theory must be endorsed by practice before confidence will enlist, much more can be effected by the many in a given time, than by a single individual, though he were to labor for a period equal to the aggregate time employed by the many.

The agricultural art is purely practical from its very nature; therefore, the great necessity of concentrating the talents of many, in order to procure its rapid development. For, by experiments in agriculture, a knowledge of the art is to be obtained, which will always be in proportion to the number of well directed experiments. But of what avail would be the strife after knowledge in this or any other practical subject, unless it be communicated when obtained? The objectors to voluntrary associations, would perhaps say that recourse to the press would answer every purpose. To this we would assent, if every one would take every paper devoted to the agricultural interest. But who is it that does? One man brings to his aid the knowledge he derives from one paper, while his neighbor uses another, which, as far as it goes, is well enough; but would it not be much better, and attended with more immediate benefit, if, after a community of men have been thus laudably engaged, each in his own way, to improve his knowledge in "the great parent art," they would assemble at least once a year, and freely communicate upon the subjects, and success of the experiments by each made? If communities of men would thus act together, the knowledge which now exists, but which is almost imperceptible by its effects, owing to its partial dissemination, or probably owing more to the distinctive variety of subjects composing the "one art," which each man has informed himself, but which is not commonly appropriated, would be concentrated as to its force and wider spread in its application, so that each man could appropriate to his benefit the aggregate knowledge of the whole community, as easily as he now does that which he may have obtained by his isolated exertions.

But how are men to avail themselves of the knowledge acquired by each other, with greater facility than by social intercourse, than by mutually interchanging views, declaring the result and explaining the mode of operations by which that result was obtained? All will admit that it is the most expeditious and effective means.—From social intercourse, advantages of a much higher order may be gained than new books can afford on the subject of agriculture. Suppose the inquiry to be—"How shall we realize the greatest product of corn from a given quantum of land and labor?" To obtain this information, ten farmers from the number of your society are selected, to make experiments; each one adopts the mode of planting and cultivating, which, in his opinion, will succeed best, and at the meeting of the Society, (and in the presence of the whole Society,) each one of the ten appointed for the purpose, exhibits the result of his labor, and explains the plan pursued to obtain it. In this way, each member of the association obtains, in one year, an amount of practical information, which would otherwise have cost him the labor of ten years.

To the growers of stock, too, much good will result from Agricultural Societies. A premium offered for the finest domestic animal of whatsoever kind, will induce farmers to turn their attention to the improvement of their stock, not because the premium itself is an inducement, but because by such tribute of reward, an honorable emulation is excited to excel at exhibitions, more from the honor consequent upon the reward than the reward itself.

Apart from the above consideration, an agricultural society is of incalculable benefit to stock raisers, because these premiums will enhance their value. The fact that your cow, or horse, or hog, had taken the premium as being the finest animal of the kind exhibited at a show of animals, would give to a purchaser of fine stock a higher estimate of its value than any commendation of yours could inspire.

In confirmation of these views, I might instance those sections of our State in which Agricultural Societies have been organised. With Fairfield District especially, I claim to establish my views. Examine for yourself the papers of the day, and frequent advertisements of "fine stock for sale," may be found from that District, and it not unfrequently happened that a cow and calf has sold here for *one hundred and fifty dollars*. And thousands of acres of land which were, ten years ago, thrown away and given up, to be disfigured by gullies, as worn out and valueless, are now in a high state of cultivation, and yielding to their owners far heavier crops than they were capable of when first cleared. And the very lands which six years ago would not have commanded, upon an average, five dollars per acre, could not now be purchased for ten dollars per acre. All of which, as every one acquainted with that District will say, is mainly attributable to the influence of the Monticello Planters' Society. With confidence, therefore, I recommend the formation of an Agricultural Society in our District; for just as sure as like causes produce like effects, just so sure will such a Society benefit our district.

We may promise ourselves, as farmers, other benefits, which we think Agricultural Societies will promote. No one will deny but that Agriculture has heretofore been esteemed as one among the humble pursuits of life—as not possessing in itself material for investigation beyond the capacity of the humblest intellect. It has never been permitted to be ranked among and to be called a science, but has ever been esteemed as a mere art, to be learned from imitation, and requiring neither taste nor talent to enable its initiated to become *par excellence* with the most perfect of their predecessors. At the same time all will admit that agriculture is the source and foundation of every comfort of the human family, and of the wealth, power and glory of a nation; that although the seas and oceans bear our vessels to every nation on the globe, yet agriculture *alone* unfurls their sails and gives their freight; that notwithstanding science, by its magic power, has thrown the wide world into a mere neighborhood by the influence of steam, yet were it not for agriculture, distance would again be what it was, and the now artificial neighborhood would spread out again into a world. Whilst this is admitted, it seems no age of the world has given to it an attention worthy of its position, or which would warrant a conclusion that they knew its importance. The prevailing ignorance upon the subject of our remarks is farther manifest, from the singular fact, that agriculture has undergone less change in its manner of pursuit, than any other of the ancient arts. Mechanics are now affording to the human family comforts and conveniences of which the people of the last century never dreamed—and the same might be said of the learned professions—but where is agriculture? It is now where it was at a period so far back that history cannot inform us who is entitled to the honor of having done for the art what has been done for it. If we knew who invented the plow, and taught the horse and ox to become subservient to the uses of man, we would be compelled to revere him as the greatest benefactor of the human family, and as alone entitled to the singular honor of having possessed a skill in his profession, a superiority over which no individual of any subsequent age has been able to claim. And why is it so? Is it because it wants importance? or is it because its importance has never been appreciated. To the latter we must attribute its neglect. Parents never educate their children with a view to qualify them for the pursuit of a planter. Yet, if they design their children for any of the learned professions, they consider an education indispensable—an education favorable to the particular profession. But the world practically carrying out the idea that "any fool can be an agriculturist," none are educated for that purpose. Hence we may account for the existence of so many worn out and desolate farms—the frequent occurrences of those distresses consequent upon emigration. It is not from choice that men leave the home of their youth, the graves of their parents and children, of their friendly associates in life, the altars by which they worshipped, and around which thousands of friendly associations cluster; it is from necessity. Ask these, when you witness their distress upon the eve of emigration, why they go, and they will answer, "I can no longer make a support here." It is the tyranny of ignorance in the art of agriculture that creates the necessity. This state of things can only be remedied by awakening up an interest in the cause, which the efforts of Agricultural Societies can effect. Then will learning lend her

aid in developing the "riches of the art;" then will our country be able to claim her citizens as her wealth, and the great pride and boast of man consist in exhibitions of devotion to his country's good, by his attainments in agricultural knowledge.

ADDRESS OF THE HON. CHAS. DAYAN, BEFORE THE LEWIS CO. N. Y. AGRICULTURAL SOCIETY.

Extracts from the Address.—From the foregoing remarks, gentlemen, you will discover the importance of your position, and the importance of your occupation. It is undeniably true that your occupation is as honorable as any on earth, claiming the greatest antiquity, and in fact being the only one supplying the absolute wants and necessities of life, and as such must claim a pre-eminent usefulness. In a political point of view, you are emphatically the "bone and muscle" of the nation; you hold the power and the reins of this government in your hands. It is among the agricultural part of community that you find that integrity of purpose and purity of morals which form the moral integrity of a nation. You hold this power, it is true, but beware how you use it. All power in the hands of man is liable to abuse.—It is a characteristic of our nature to be inflated with power and to transcend our powers and duties for no other reason than that we have them; from you this abuse of power is hardly to be expected, so long as you sustain that moral and political integrity which have heretofore characterised your profession. You must always remember that ours is a government of laws based upon equality—equal rights and equal privileges are the legitimate inheritance of every American freeman; never use the power to degrade, impoverish or enslave your fellow man—for remember the language of St. Pierre, "That while we are riveting one end of the chain around the ancle of the slave, Divine Justice is riveting the other end round the neck of the tyrant."

No class of community has done more for society than you have The farmer has in all ages of the world been the pioneer to christianity and civilization—you have cut through and gladdened the way for the gospel ministry, and prepared them to carry the glad tidings of the gospel to the remotest part of the nation. In a word, you have been instrumental in civilizing and christianizing a world—for who can deny but what christianity and civilization have followed in close proximity the axe and the arm of the husbandman.

You have always nourished and sustained all other branches of industry—they have been solely and entirely dependent upon you, and are so now and always must be. Agriculture, Commerce, and Manufactures, have been denominated twin sisters, mutually dependent upon each other. But strike out of existence Agriculture and Commerce, and manufactures must, of necessity, perish. Strike out the other two, and agriculture, of necessity, must survive. Strike out agriculture, and man can only live as long as he can sustain himself on the spontaneous productions of the earth. Hence you see that you are not only the lords of creation, but the lords of the soil; and as such, you should, by all commendable means, strive to elevate yourselves to the dignity of your profession. You are styled the great producers of the nation—your productions are consumed by all the nations of the earth. Your national flag flutters in every breeze, and every port and harbor is whitened by your canvass. You may say these are high sounding words without meaning—examine for yourselves and you will find it true to the letter. Hence the dignity of your calling. You live in an age of improvement, and the field before you is wide, and it must be occupied by you, your children, and your children's children—and fear not, my friends, that your profession will be overstocked.

* * * * * * * *

I have already detained you long, and will close, by making a few remarks to the fathers and mothers engaged in agriculture. The father should duly appreciate the increased intelligence of his day, and consequently see the necessity of educating his sons. Scientific works on agriculture should be put into their hands and their attention called to their necessity. You should also teach them in the most concise plan of practical husbandry: when you try experiments, test them in the presence of your sons, explain to them the principles of your tests, and lead them to believe that demonstration is the best mode of instruction—teach them to reason from cause to effect, and to watch every practical result, and above all, teach them industry.—Teach them the old proverb, "a young man idle, an old man needy." That business is the salt of life, idleness its canker. Teach them that God, in the fulness of his wisdom, has ordained that the necessity of labor should be the enjoyment of man, and that it is honorable—teach them that labor gives strength and vigor to the moral as well as the physical faculties—that it gives food to the mind and strength to the body.

If you have hired men, never reflect upon their condition of life, but on all occasions give them to understand that you will estimate them by their moral worth.

Never taunt them for their poverty, unless it is the result of idleness and crime: in a few words, do all you can to sweeten their toil and condition of life: this will give them a cheerful heart, and a cheerful heart will give them a willing hand. In all your deal with them, maintain a scrupulous integrity, and for the time being as a father, aid and direct them by good and honest counsel.

To agricultural mothers I would say, educate your daughters in all the domestic relations of life. Teach them to know that honest industry is honor; idleness, dishonor; that industry is health and wealth; idleness, misery and want. These are obligations you owe your daughters, if you wish to prepare them for future usefulness in society. Teach them to despise the empty scoff of that female who is too good in her own estimation to work, devoting her time to spinning street yarn, and who, like Solomon's lilly, toils not, neither does she spin, and whose little hands are too delicate to knead a biscuit. Mothers, depend upon it, your daughters, in the estimation of all intelligent people, rightly educated, are held in higher estimation than those who sneer at honest industry; teach them never to feel themselves degraded by domestic duties. Teach them to stand to their post when they see a person approaching the door, and not run for fear of being caught at work. Teach them that every sensible man will pity a girl who runs to avoid the imputation of labor, and will despise her extravagance, if she should be caught at the wash tub in a silk dress. If you have female domestics, instead of treating them with neglect and indifference, be to them for the time being, a friend and mother—treat them with kindness and respect, and if occasion should require, throw the mantle of charity over them. Teach them that their toil is not servile but meritorious—do this and you will seldom want help.

From the New Genesee Farmer.

USE AND PREPARATION OF THE FOOD OF VEGETABLES.

To understand the process of nature by which certain elements of earth, air and water are transformed into living plants, and the best method of preparing these elements so as to produce the largest crops at the least expense, are objects worthy of the careful and profound study of every cultivator of the soil.

If we take 100 pounds of ripe hay, oats, wheat or corn, including the roots, stems and seed, and burn them carefully in the open air, we shall have only about 3 per cent of alkaline earths left, most of which can be dissolved in water. If we burn a pound of candles, or a pound of oil, whether animal or vegetable, the whole of these substances (which are truly "the fat of the land") will be transformed into invisible air and vapor. The atmosphere and water are nature's great storehouse for preserving an exhaustless supply of vegetable food. By *respiration*, *fermentation* and *rotting*, all organic structures are transformed into gases and soluble salts. It is from the lime dissolved in the ocean that the oyster elaborates its shell, and the coral insect rears its massive mountains of coral rock. It is mainly from the phosphate of lime held in solution in its mother's milk, taken from her food, that the sucking calf elaborates its solid bones. Without lime to be dissolved in her gastic juices, and taken into her circulating blood, the hen can make no solid shell to her egg The unnursed infants in the great cities of London and Paris, brought up without milk, and fed on arrow-root and other food that contains little or no lime, have soft, cartilaginous, rickety bones, simply because neither animals nor plants can make *something* from *nothing*.

As a general rule it is strictly true, and moreover it is a truth of great practical importance, that a feeble, diseased stem in wheat, liable to rust, &c., and a shrunken berry, are owing to some removable defect in the food of the plant. So different are the essential elements of the seed of this plant from those of its straw, that it is practicable to raise wheat that will yield twice as much grain in weight as there is weight of straw, taking it from the root. That it is also practicable to grow wheat which will give five times as much straw as grain, most farmers know by sad experience.

On page 254 of Transactions of the New York State Agricultural Society, 1842, Gen. Harmon, of Wheatland, states, that "In 1803, Pettin Sheffer, Esq., of this town, harvested 40 acres of wheat grown on the Genesee flats, that produced 62½ bushels per acre." What elements did nature provide, and where did she get them, for the growth of such a crop? Manifestly they came from the mineral and vegetable matter washed down from the highlands above. These elements are just as abundant now as they were at the close of the creation. Having found out, within the last 40 years, since Mr. Sheffer harvested his famous crop, what these vegetable elements are, and how to combine them under more favorable arrangements for the production of *cultivated* plants than nature has anywhere done, men of science have greatly exceeded the above large product. From nature's crab-apple, that weighs less than an ounce, science has at last grown fruit weighing twenty times as much, or 2000 per cent. more than the original!

By the use of charcoal and lime, a Mr. Pell, of Goshen, in this State, has harvested this season at the rate of 78 bushels 24 quarts of wheat per acre. The ground was accurately measured by a surveyor's chain, and the grain a sealed half-bushel, and the statements are all sworn to by two reputable men. I notice this triumph of science with the more pleasure, from the fact that I have long and zealously urged the use of these abundant elements upon the attention of the readers of the papers for which I have written.

It is more than twenty years since I first began to use pulverized charcoal to absorb the gases given off by decomposing vegetable and animal matter, urine, and the like, to be applied to garden and field crops. Its value in correcting the taint in meat, and purifying rain-water in filtering cisterns, led me to believe that it would be just the thing to absorb the food of plants from the atmosphere, into which so much passes, and hold it about their roots in a condition that neither dew, rain, snow, frost, nor the heat of the sun, would injure it or take it away. To labor hard to save and draw out manure on to one's fields, and then lose 60 or 80 per cent of this vegetable food by its solution in water, and washing away to form something like the Genesee flats in the bottom of Lake Erie, I never regarded as very good economy—which, by the way, is the soul of good husbandry.

A pint of human urine contains ammonia enough to make, with the other necessary elements, 60 pounds of good wheat. Charcoal

will absorb this liquid, and render it quite inoffensive to the olfactories of the nose. The direct application of urine to the soil, after the German practice, is bad economy, unless the soil contain a large portion of humus, or vegetable mold, for its tenacious retention. It is a better plan to have a reservoir filled with pounded charcoal under the stable floor, or near to the stable, into which the liquid excretions of all animals should be conducted like cider from the press. When nearly or quite saturated with urine, this coal will be manure of extraordinary power and durability—for nothing in the soil, but the roots of growing plants, will be likely to extract a particle of this vegetable food.

After wheat, corn, or grass has taken up all this nourishment, the coal (unlike lime, which has parted with its carbonic acid in the same way) is insoluble in water, and remains, as in a filtering cistern, to absorb and hold, for the benefit of the growing plant, more vegetable food from every rain that falls to the earth. For be it remembered, that dew, rain and snow—the poor man's manure, bring back to the earth all the gaseous elements given off by all the fires, respiration, and other decomposition of solid and liquid matter.

For the same reason, coal should be largely used in the formation of compost heaps. And where the farmer has straw which he can use to make beds for his horses and cattle in the stable, this, with a quantity of coal pounded with a flail, can be spread upon the stable floor, to absorb all liquid excretions. All these excrementious substances should be kept under shelter. Wood ashes, lime and muck, or vegetable mold, are valuable ingredients in all compost heaps. The coal stratum should be placed between the lime and the manure, and the whole should be covered with turf or more coal.

The analysis of soils abounding in fragments of limestone rocks shows a marked deficiency of this important element in their composition. The reason of this perhaps unexpected deficiency I will now explain:

Disintegrated limestone is decomposed by the vital action of plants, and its carbonic acid is taken up by their roots. It will then combine with more of this gas which abounds in the air and soil, and will again give it out to growing vegetables. It is in this way that plaster (sulphate of lime) after it has parted with its oil of vitriol, often produces such wonderful effects, although the amount applied is less than one forty thousandth part of the soil from which plants draw their nourishment. The action of the sulphuric acid, as I understand the matter, I will not stop to elucidate. But I wish to fix public attention upon the circumstance, that when lime in the soil has parted with its acid, whether sulphuric or carbonic, and especially the latter, it is soluble in water, and hence very liable to be washed out of the soil by rains, &c. All water that has passed through a soil possessing sufficient lime to be good wheat land, is *hard*, or holds lime in solution of which it has robbed the soil. The same is true, in a less degree, with regard to leaching of the soil, and its loss of allumina, potash and soda. The cultivation of the earth, without allowing any vegetables to grow upon it, would exhaust its fertility very rapidly.

The remedy for this is, to cultivate less land in grain crops, and cultivate it far better; to remove all excess of water by draining; to plow deep, and turn up to the sun virgin earth from below, and apply thereon manure, coal, lime, ashes and salt. Instead of applying large quantities of quick lime at distant periods, it is far better to apply a less quantity and often, to make up for the loss that occurs from its being dissolved in water, and carried with it into rivers and the ocean.

Leached ashes are valuable when applied to grass lands; and are far from being worthless on wheat, rye, oats and barley—all of which need their silicate of potash, to give them a good, firm stem. Grass and wheat know as well how to convey the apparently insoluble elements in leached ashes up into their organic structure, as did the trees from which these ashes were obtained. D. L.

Buffalo, Dec. 17, 1843.

GARDENING.

The season being at hand for gardening, we consider it our privilege as journalists to suggest a few things in reference to the importance of the science as well as instruction on the first and most important operations.

The history of gardening is most interesting in all its details, and for information on this subject we commend to the reader's attention Loudon's Encyclopedia, as containing more valuable information than all other works we have examined. In point of profit, no labor gives a better reward than that performed in the garden. Near large cities, extensive and industrious communities make handsome supports from the sale of vegetables and fruits.

No family, scarcely, sufficiently appreciates the every day comforts, to say nothing of the luxuries, of the garden. Vegetables and fruits may give at least half a support to a family, and when it is considered they constitute the most healthful and agreeable diet, they become much more valuable. It should not be forgotten that the science of gardening is an intellectual employment of the higher order. Botany, geology, chemistry, vegetable physiology and entimology are intimately connected with its practices.

Again, none but those who cultivate the garden can estimate the pleasure accruing to those who spend a portion of their time in its operations There is not a seed, sprout, leaf, bud, flower, or particle of fruit that does not afford pleasure in an eminent degree. No marvel, indeed, our Heavenly Father should have selected a garden for the residence of the first happy pair, and no wonder the most scientific of both sexes, throughout the civilized world, are charmed and delighted with the garden.—We will, however, not enlarge on this part of the subject.

The operations of the garden shall next have our attention.

1. The matter first to be studied is the location and character of the soil. For early vegetables it is preferable to have a southern exposure. The morning sun brings forward plants much faster than the evening rays, and therefore, when practicable, the land should incline to the southeast. For late roots, gooseberries and currants, a northern protection from the scorching rays of a mid-summer sun becomes necessary. The soil is of much moment.—Frequently there is a superabundance of clay. When this is the case, no application is better than sand. Pulverized charcoal is excellent on clay, (I have tried it.) When sand superabounds, clay may be put on advantageously.—But for an unproductive soil, well rotted stable manure may be indispensable. Fresh mold from the woods has advantages over all other applications. It is freer from insects, and injurious seeds of weeds and grass, than stable manure, and has no tendency to fire the plants.

The most important point in a country garden, is to obtain a sufficient quantity of manure. In towns it is not so, and not unfrequently there is so much put upon gardens that neither vegetables or flowers are good. There is little fear though to be anticipated on this score in our country gardens. To get enough vegetable mold is the important matter. This will correct most evils of a soil.

2. No time should be lost in spading the ground, and having it made ready for sowing. In our judgment, the more the soil is exposed to the frosts the easier it will be of cultivation, and the more abundant the crops. We think it no economy to plough a garden. Potatoes, beets, carrots, &c., may be cultivated as field crops, and then ploughing is preferable; but in the garden the spade, hoe, fork and rake, should be the chief implements. Land can be put in better state by one spading, than four ploughings, and when the plough is the reliance, we generally find it inconvenient to use it after the seed are sown, and the consequence is, too often, the weeds take entire possession. But whatever instruments are used, the soil should be thoroughly pulverized to a considerable depth, and always kept friable and free from weeds, which drink up the soul of the earth.

3. The first preparations should be for early peas, radishes, lettuce and potatoes. The soil for peas should not be very rich in stable manure. One-third of sand and two-thirds of vegetable mold answer admirably. We call attention also to another item in the cultivation of peas, which is not generally regarded. Commonly, the drill is too deep and narrow for early peas. Raise the soil about four inches, and open a trench at least six inches broad, and scatter the seeds plentifully over the whole. By this mode, the sun will have the greater effect; the rows will be broader; the stocks will mutually assist each other; fewer sticks will be required for support; and the crop will be three or four times as great as in the ordinary plan. Early peas may be protected by planks or broad rails during freezes, and the sun should exert all his influence in the heat of the day.

For radishes and lettuce, when not protected by glass, open beds should be made. Their construction is simple and cheap. Mark off a bed the size wanted, take out from six to ten inches of the surface, and fill it two-thirds full of unrotted stable manure, old tan, or fresh leaves. Some eight or ten days afterwards, put on about six inches of good garden mold, rake it to a level, and the sowing may commence the first open day. If cheap frames were put around such beds, and they could be covered with plank in bad weather, the plants would come forward a little sooner.

Cabbage seed might be sown in the same manner for early crops. But in all these operations, judgment, and many circumstances dependant upon the season, must of necessity have a contrary influence.

Nashville Agriculturist.

EXPLANATION OF TERMS.

(Continued from page 191, Vol. 1)

24. *Rotation of Crops*—is a course of different crops, in succession, on the same piece of ground, for a certain number of years, after which the course is renewed and goes round again in the same order.

There is a difference between a *course of crops* and a *rotation of crops*. Thus, if a piece of ground in sward be broken up and planted with Indian corn the first year; the second year with potatoes; the third year sowed with oats and grass seed; and mowed the fourth, fifth and sixth years—this makes a course of crops.—If, then, the seventh year, it be again broken up, planted as before, and the same course of cropping pursued, it becomes a *rotation of crops*.

25. *Soiling*—is the feeding of cattle, either in the barn or yard, through the summer, with new mown grass or roots.

26. *Live Hedge*—is a fence formed of living plants, usually the white thorn, planted closely in rows, which, being trimmed annually and kept clear of weeds, in a few years grow into a living, permanent fence, capable of stopping effectually every kind of domestic animal.

Most of the common farm fences in England are of this kind.

27. *Quicks*—a name commonly given to the young plants of the white thorn used in planting hedges.

28. *Layers*—are the tender branches of trees and shrubs bent down and buried in the earth, leaving the tops out, in which situation they are fastened with hooks to prevent their rising.

The part in the earth sends out roots, after which it is separated from the parent tree, and transplanted, in the same manner as trees raised from the seed.

29. *Cuttings or Slips*—are small portions of the twigs, branches or roots of trees or plants, cut off with a knife, or slipped off with the thumb and finger, for the purpose of setting or planting

in the earth, with a view of producing new plants or trees of the same kind.

30. *Sets*—are young plants taken from the seed bed to be set or planted out.

Cabbage and various other plants are usually propagated in this way, being first sown in beds, from which the plants are taken up and set out in fields or gardens.

31. *Fallow*—signifies land in a state of rest, not being planted or sown for a season, but repeatedly ploughed and harrowed, for the purpose of clearing it of weeds, and of dividing and pulverizing the soil more perfectly.

Such is sometimes called a *naked fallow*, because the land carries no crop.

32. *A Green Fallow*—is that where the land has been rendered mellow and clean from weeds, by means of some kind of *green crop*, such as turneps, peas, potatoes, &c., cultivated by the horse-plough and hoe.

The crop so cultivated and for the above purpose, is called a *fallow crop*. In this mode of fallowing, no time is lost by the land being left idle or in an unproductive state. Fallowing is sometimes distinguished by the season of the year in which the business is either principally or wholly accomplished; hence we have summer, winter and spring fallows.

33. *Winter Fallowing*—is only breaking up the land, or ploughing it in the fall, and leaving it exposed to the action of the frosts of winter.

34. *Dibble*—is a tool of very simple construction, for making holes in the ground, at equal distances, in which certain seeds are sometimes planted.

Seeds planted in this way are said to be *dibbled in*. It is used also in transplanting. The handle of an old spade or shovel, sharpened at the lower end, may answer very well for this purpose.

35. *Tiller*—is a term used to signify the branching out of a single grain, as of rye, oats, or wheat, *into several stalks*.

Where the individual kernels of any grain throw up *many* stalks, it is said to *tiller well*. Each shoot thrown out in tillering may be removed and treated as a distinct plant. A remarkable instance of this is related in the fifty-eighth volume of Philosophical Transactions. Of some wheat sown in June, one of the plants was taken up in August and separated into 18 parts, and replanted: those plants were again taken up, and divided in the months of September and October, and planted out separately to stand the winter, which division produced sixty-seven plants. They were again taken up in March and April, and produced five hundred plants, from which grew twenty-one thousand one hundred and nine heads, yielding three pecks and three quarters of wheat, all produced from one single grain.

36. *Ley*—a term used in agriculture, to signify land in the state of sward or grass.

We frequently read of wheat being sown on a *clover ley*; by which we are to understand, land in clover, directly after mowing, being turned up, and sown with wheat on the back of the furrows.

37. *Meadow*—grass land for mowing.

In this country, the word is seldom used to signify upland mowing, but that which is low and moist, and seldom or never ploughed. In other countries, and by some writers on agriculture in this country, it is the name given to all *mowing grounds*.

38. *Effluvia*—are those small particles flowing out of any substance, which produce in us the sensation of smell.

Thus, most flowers send forth effluvia; and substances in a state of putrefaction send forth effluvia of a very different nature.

39. *Chemistry*—is the science which enables us to discover the nature and the properties of all natural bodies.

40. *A simple substance*—is one which cannot be decomposed, or which is not produced by the union of two or more substances; such as iron, sulphur, &c.

Sir Humphrey Davy, a celebrated chemist in England, reckoned forty-seven known simple substances in nature.

41. *A Compound Substance*—is one which may be decomposed; or which is produced by the union of two or more other substances of different natures.

Thus, gun-powder is a compound substance, being composed of charcoal, sulphur, and saltpetre; and these substances, or those which united together, produce a compound substance, are called its *constituent* or *component parts*.

42. *The Elements of Matter*—are the simple substances into which all surrounding objects are capable of being reduced.

All the substances about which agriculture is employed are compounds; that is, they consist of elements into which they are capable of being resolved. Of this, no farmer should be ignorant; and he ought to attain at least to so much chemistry as to know the nature, the properties, and the combinations of those elements, (the number of which is very small,) which are continually working such wonders before his eyes.

43. *Analysis*—is the resolution or separating of a compound substance into its elements, or constituent parts.

44. *Caloric*—is the name which modern chemists have given to fire; or rather, it is that extremely subtile fluid which produces in us the sensation of heat.

The sun is the grand source of caloric, it is afforded also from combustion, and in various other ways. Thus, take a small phial about half full of water, grasp it gently with one hand, and from another phial pour a little sulphuric acid, or oil of vitrol as it is sometimes called, very gradually into the water. The phial will become hot, which is in consequence of the caloric disengaged from the mixture.

This subtile matter pervades the pores of all known substances, most of which are capable of existing in *three different states*—the solid, the fluid, and the ærial form or gaseous state; and these three different states depend on the quantity of caloric which may be present in any substance, at *any one time*. The first of these, termed *the solid state*, depends on the presence of *a small quantity of caloric;* such is water in the state of ice; when the quantity of caloric or matter of heat is increased to a certain degree, the body passes into the second or *fluid* state. Such is ice or lead when melted; and by still further increasing the quantity of caloric or heat, it rises into vapor, called the *æriform* or *gaseous state*, or simply gas.

"Almost all natural bodies are susceptible of existing from the mere expansive energy of caloric in these three states; and the only difference among them is, that some require *less* and others a *greater* proportion of caloric to induce these changes. Water, which usually exists in our atmosphere as a fluid, can fluctuate by a very slight alteration of the thermometer, either into *solid* ice, or into æriform vapor. All the metals exhibit the same phenomenon. If solid, they melt by the application of fire into a fluid mass; and if that be carried to a given pitch of intensity, they fly off in fumes and assume the gaseous state. The solid earth is not exempt from the dominion of this universal law. Flint and sand, when put into the furnace, dissolve into liquid glass; and if exposed to a still more powerful heat, they are dissipated in vapor and assume new ærial forms. Let it, therefore, be remembered, as an established principle in chemistry, that when different portions of *caloric* enter into combination with bodies, they pass, according to the quantity, into the respective states of *solidity*, *fluidity*, or *æriform vapor*."

45. *Gas*—is any substance converted to vapor by the action of caloric.

In other words, it is any substance dissolved in caloric; or, it is any substance reduced to the æriform state by the action of caloric. By the *æriform state*, it must be remembered, is *meant a state similar to that of air*, which is neither *tangible* or *visible;* that is, it can neither be handled with the hands, nor seen with the eyes.

It may seem strange that the hard substances from which we receive so many knocks and bruises, should in any way be converted into such a state. Yet something of this is seen every day. A log, which it would require two men to lift, on being burnt, is all converted into gas, except a residuum of ashes so small as to be collected into a measure and carried by a child. So in the putrefaction of an animal, the solid substance left is little more than sufficient to color the ground; the rest, except some fluid parts which may have sunk into the soil, is all converted into gas.

46. *Alkalies*—are substances of an acrid, burning taste.—Their most distinguishing properties are

1st. They change the blue juices of vegetables, as of violets, or red cabbage, to green.

2d. They render oils missible with water, thus forming soap.

3d. They combine with acids, thereby forming various kinds of salts.

There are only three alkalies. 1st, Potash, or the Vegetable Alkali. 2d, Ammonia, or the Volatile Alkali. The two first are also called Fixed Alkalies; the latter, or Ammonia, is called the Volatile Alkali, because it exists as a gas, and is that substance which, on opening, a smelling bottle so effectually searches the nose and head.

JERUSALEM ARTICHOKES.—In connexion with the advertisement of Mr. J. A. CLARKE, on the last page, we desire to invite the reader's attention to the following remarks of the editors of the Tennessee Agriculturist, showing the value of this vegetable. Among our exchanges, we have seen numerous references to the Artichoke, all of which concur in recommending it as very valuable; but we deem the annexed views quite sufficient to induce the planters of Georgia and Carolina to make an experiment in raising them.

JERUSALEM ARTICHOKE—(*Heleanthus Tuberosus*)

From the fact that many enquiries have been made of late, in relation to this very remarkable and useful plant, I am disposed to speak a few things of its culture and uses. The Jerusalem Artichoke is a native of the warmest parts of America, and of course was unknown in Europe, till after the discoveries in this country by Columbus and his coadjutors. Since that time it has been cultivated to considerable extent on the continent as well as in Great Britain, but the reports of its profits have considerably varied in that, as well as this country. In the old world, some have cultivated it to afford shade to the game; others have converted the stocks and leaves into fodder for cattle, and others again, have encouraged its growth for the tubers alone. In this country, there are two important objects to be kept in mind in raising Artichokes: 1st. The improvement of land; 2dly. The use of the tubers. However, the first matter is the cultivation, and I begin with

1. *Soil.* Almost any kind of land will produce Artichokes, and it is remarkable, that they will grow in the shade, that is, under trees, or in fence corners, very well indeed. Land, however, with a tolerably good sandy mold, will give the most abundant crop. Low, wet soils, and very tenacious clay, are not so suitable.

2. *Preparation of Land.* The ground should be broken as for corn, that is to say, one good, deep ploughing, and a thorough harrowing, will answer the purpose admirably.

3. *Laying out.* Rows laid off four feet each way with a bull's tongue or shovel plough, in most soils, will be the proper distance.

4. *Quantity of Seed.* From four to five bushels will be required to the acre, and unless the long roots are broken to pieces of three or four joints, or eyes each, this quantity will not be enough.

5. *Manner of Planting.* Drop one root at

each cross of the plough, and cover from one to two or three inches with a harrow, hoe or plough.

6. *Cultivation.* So soon as the young plants appear, run round them, with a cultivator, harrow or light plough to destroy the young weeds, and loosen the earth. Keep the ground free of weeds and open to the influence of the atmosphere, till the plants are about three feet high, when they should be laid by, by the use of a cultivator; or, in the absence of a cultivator, and when the land has been ploughed, the harrow should pass both ways to leave the ground loose and the surface level. Generally, about the same cultivation given to corn will answer well for Artichokes.

7. *Digging.* This is the most troublesome job in the management of this crop; and if the hoe is the dependence, the labor will be very tedious. The better plan, is to lay off a land as for breaking up the ground, so soon as the frost has killed the under leaves of the stocks. The plough should run from 6 to 9 inches deep, and let the hands, big and little, pass directly after the plough, to pick up, that none of the roots may be covered by the next furrow.

8. *Yield.* The produce to the acre is variously estimated from 500 to 1000 bushels, and it is probable the turn out on medium land would be nearer the latter than the former.

9. *Uses.* In England and other parts of Europe, the tubers have been considered quite a delicacy for man, and without doubt they make the most beautiful pickles. But their chief importance, in this respect, is their use in feeding hogs. From the middle of October to the middle of November, the hogs may be turned on the Artichokes, and with salt always in troughs, to which they can have access, they will grow and thrive till next spring, particularly, if the ground is not too hard for rooting. I have not experimented to ascertain the quantity of hogs to the acre of good Artichokes; but from the observation of two seasons, I am of the opinion 20 head will do well on an acre for four months. As some have complained their hogs would not root after them, it may be necessary, as hogs, like men, know not much before learning, that they be taught to root after them. This is done by calling the hogs after a plough that will throw out the roots, till the grunters learn their habitation, which will require but a very short time.

10. *Improvement of Land.* As the stocks grow from ten to fifteen feet in height, and the thick, porous foliage, much of the food of the plant is received from the atmosphere, and thereby the soil is not so heavily taxed as by other crops, the ground is protected from the killing rays of the sun and the stock and leaves fall and rot very soon. These advantages, with the manure from hogs, afford the cheapest, and amongst the richest coats in my knowledge. It is my conviction, (in the absence of long experience,) that Artichokes in summer, and Hogs in winter, will enrich our poor lands cheaper and much better than upon any other plan. To be sure, a farmer cannot have all his land in Artichokes, but every one should have enough to support his hogs through the winter, and I venture those who give this crop a fair trial, will reluctantly abandon it.

11. *General Remarks.* A few farmers of my acquaintance have informed me, that they have succeeded with Corn and Artichokes together, and it is highly probable this will prove a successful mode of cultivating these two crops, but on the system of "one thing at a time," we would prefer each crop separately. Some have supposed the second year's growth on the same ground would be more valuable than the first; but this is a mistake. The plants grow so thick the second year, that not more than half a crop can be anticipated. It might answer, to plough out rows and cultivate the second year; but the practice of putting Artichoke lands in something ese the second year, is the plan I must prefer.

Amongst the arguments which might be used in favor of this crop, it should not be forgotten that there is no labor of digging, but for seed; that more troublesome weeds and grasses are completely smothered out; and last, but not least, the young plants the second year are more easily subdued than almost any weeds known. Take Artichokes all in all, I think them worthy the attention of every farmer who wishes to enrich his lands, or raise his pork with a small outlay of grain.

USE OF LIME.

We have ever been among the most zealous advocates for the use of lime; but in all our advice we have recommended *caution* to be observed in its application; and that before using it, it would be well to ascertain whether the soil is or is not deficient in it. We hear one person say that it had acted like a charm upon his land, while another will tell you, that he used it without effect upon soil of precisely the same texture where its good effects had been so manifest. The reason of this difference in effect, might be accounted for in one of these ways: 1st. That the land of the one had organic remains in it, and the other none. Hence the necessity for the analysis of soils, so that the farmer may go to work intelligently. That lime is one of the most powerful agents in the improvement of soils, there can be no doubt; but that lime alone will make a *poor* soil *rich*, we never have and never will believe. The food of plants consists of several substances, all of which is necessary to be present in the soil, before its fertility can be perfected—among these substances we hold lime to be of the very first importance—but we have long thought, that the quantity of lime to the acre, could be very materially decreased below a hundred bushels, as the only benefit to be derived to the growing vegetables from it, is from that part which is dissolved by the rains, which part is small indeed, in any one season. Why then make a *large* outlay for lime, when a *small* one would answer for all present purposes. To be sure, lime also performs a *mechanical* operation, in the change of the texture of the soil, and in so far as this effect may be desirable, a larger dose of lime may be productive of benefit. But why apply 100 bushels of lime, per acre, to an old exhausted field, where there was nothing for it to act upon, when 25 would answer better? Our views are, that before land, which may have been completely impoverished by bad culture, can be materially benefitted by the use of lime, that two or three green crops—say of buckwheat or rye—should be ploughed in. Either of these crops may be grown by applying a bushel of plaster to the acre at the time of sowing. If this course of improvement were pursued, there would not be so many croakings about the inefficacy of lime. Lime, to act efficiently, must be combined with vegetable or animal manure—with these, there can be no question of its meliorating powers, but we do most seriously question its capacity, alone, of making an infertile soil a rich one.

With regard to the quantity of lime to be applied to an acre, there is great diversity of opinion—some apply 100; some more than that, while others think 80, 60, or 50 bushels to the acre is preferable, and then there are those who think 25 bushels enough; and we confess that we are among those who think favorably of the least quantity named, unless there should either be a larger quantity of organic remains in the soil, or some two, three and four green crops be first ploughed under. We reason in this way. If 25 bushels to the acre is more lime than can be dissolved in *one rotation*, why should we deprive ourselves of the use of the money which the difference between 25 and 100 bushels would cost? If then, for present purposes, 25 bushels will answer for an acre, is not our interest to lime *four* acres with a hundred bushels, instead of putting that quantity on a single acre? The *outlay in money*, to purchase a hundred bushels of lime, deters many small farmers from using it; whereas if they could be satisfied that 25 bushels would answer as well, they would not hesitate to undertake the liming of their land; and thus would the improvement of our worn out soils go on more certainly and steadily—for let what be said, that may, the first cost of *lime*, at the rate of a hundred bushels to the acre, is a most formidable consideration, where a man has from 100 to 400 acres requiring improvement.

We will conclude by repeating what we have before said—that we believe, in all cases of improving lands much exhausted by cultivation, that for present purposes—say for a rotation of four or five years—25 bushels of lime, besides costing so much less, would be better than 100 bushels per acre—that it would be better to repeat 25 bushels per acre every four years, until 100 bushels had been applied, than to put the latter quantity on at one time.

American Farmer.

SOWING INDIAN CORN BROADCAST.

A correspondent of the Albany Cultivator, writing from Memphis, Tenn., Nov. 23d, says: "Having seen sundry interesting communications in your valuable journal, relative to the immense yield of corn sown broadcast, I am induced to give you 'my experience,' though it is the result of an experiment on a small scale. In the spring of '42, I prepared two squares in my garden, each 20 feet by 30, and sowed them with corn, about half a gallon to each square, though this is too much. When about waist high, I commenced pulling it up by the roots, and feeding it green, to a fine Durham heifer and some pigs—the latter devouring it as greedily as the former.

"I pulled up and re-sowed these squares four times during the season, and kept the animals in fine order, without anything else worth naming. This year I did the same thing; and I am satisfied nothing will produce half as much as corn thus planted or sown. Every time I stripped a square, it was forthwith highly manured, and at once spaded up and resown; and this season I had corn thigh high when frost came. I generally fed the corn as it was pulled up, but sometimes, for relish or change, it was cut up and seasoned with meal and salt."

IMPROVEMENT OF OLD FIELDS.

As there are doubtless many worn-out old fields that have, for years, produced nothing but poverty grass, we should like for some enterprising proprietors of such to make an effort to bring them back to a state of fertility; and would suggest that by sowing a bushel of plaster, per acre, on them during the present month, ploughing them up as soon as the spring crops are in, and then sowing a bushel of buckwheat to the acre, and ploughing that crop in as soon as it gets into blossom, we have no doubt that the soil would bear a crop of rye without any thing else; and that, with the addition of five bushels of lime per acre, spread evenly, a very fair crop of wheat might be grown thereon, without any addition of other manure: and we have as little doubt, that clover seed might be sown the ensuing spring, with a good prospect of a fair crop of grass, provided the plants were *plastered* as soon as the wheat crop was cut. We have seen a very good pasture of white clover produced by the application of plaster on such fields as we have described, without the aid of any other manure, by simply harrowing the ground after the plaster had been sown a few days, the precaution having been taken, in sowing the plaster, to select a moist day to do it in; and we can see no reason to doubt that, with the addition of a green crop ploughed in, a very fair one of grain might be grown. The cost of such an experiment as we have suggested, is comparatively so small, that we hope some one will test it.

American Farmer.

TURNIP FLY.—Lime slightly strewed over turnips (just up) before the dew is off the ground in the morning, most effectually and invariably preserves the crop from the fly, &c.

COTTON GROWING.

The following, upon the subject of Cotton growing, we extract from the Concordia Intelligencer, it being from the pen of our friend and correspondent, Thos. Affleck, and knowing, as we do, the interest he takes in the subject, we feel we cannot aid the cause of improvement better than by giving circulation to the statement contained in the article. We have before expressed our belief in Dr. Cloud's system, and we consider the experiment here made by Mr. Affleck, as fully carrying out the views of that gentleman.

It we could, upon our hill lands, produce even 2,000 lbs. per acre, by adopting a reasonably improving system, and by almost *any extent* of manuring, would we not be immensely benefitted? How many planters, cultivating hill lands, gather over 700 lbs. per acre? Not many. And yet, to do even this, requires incessant hard work from New Year's day until Christmas. The difference between ploughing, planting, tending, and picking over, say 300 acres, and 100 is very great, and would allow of much labor being bestowed in making and applying manure, and in extra-deep ploughing. Nor need I descant upon the comfort and advantage to the planter, of being able to plant and tend as much ground with *one half of* his hands as *the whole of them* can pick clean by Christmas—leaving him the other hall of his force for the rest of the work necessary on a farm, including, of course, under such a system, *manure-making*.

How it would astonish the farmers in my native country, to be told, that at this late day of Agricultural improvement, their brethren in every part of America, and particularly amongst the travelled and enlightened Southern planters, it required a lengthy argument to prove to them the value of deep ploughing and abundant manuring!

Soon after reading Dr. Cloud's communication, last spring, I had a piece of tolerably good hill land, containing three acres, three rods and thirty-five poles, cleared off the previous year's trash—some 200 bushels of manure, per acre, added, consisting of the scrapings of the cow-pen, partly decayed cotton seed, and so on. This I scattered broadcast; then threw up ridges, which average, from centre to centre, five feet four inches; then harrowed down by running a heavy harrow lengthwise of the ridge. Here I planted some very superior gulf-hill seed, presented to me by Mr. Compton, Sen., near Rodney. The seed I first dampened pretty well with brine, and then rolled in dry ashes—dropping some ten or fifteen seeds at about every 26 inches, which were afterwards thinned out to a single plant.

I am not certain of the amount of labor bestowed upon this piece of ground—the *tending* was the same as that given to the rest of the crop; further than that, my overseer, Mr. Ventriss, has repeatedly said to me, that he had not one half the trouble with the grass on that piece, that he had with any other part of the plantation—"that the grass did not trouble him there." I *rather* think that it *did* trouble some of us this year! This was, of course, to be ascribed to *the deep ploughing*.

Now, gentlemen, from the (scant) *four acres* of ground, Mr. Ventriss assures me that he has already picked, 7,325 lbs. of superior seed cotton; and that there is yet cotton enough open, and to open, to yield over 2,000 lbs. more. I know that he has been very particular, both in picking and weighing, and have every reason to believe his report to be correct.

Now here we have, on a first hurried experiment, 9,325 lbs. of seed cotton from (scant) four of ground; or allowing 1,330 lbs. to make a bale, (and as it is a very fine article, I think it a fair allowance.) we have seven bales of ginned cotton!

I leave it to yourselves to draw your own conclusions, as to the amount of time, labor and manure, that one *could very easily afford to bestow* upon such a small tract of land, to produce such a result! It required at least 12 acres of the same land immediately adjoining, treated, planted and tended in the usual way, to yield as much cotton; and the staple is, *to my eye*, not nearly as good.

Western Farmer and Gardener.

NEW METHOD OF MAKING MANURES.

We published the following article some weeks ago, but having been called on by several friends for copies of the paper containing it, which we were unable to furnish, we concluded to re-publish it, and as the experiment can be made with little trouble or expense, we hope they will give it a fair trial and report the result for publication.—*Ed. R. Star.*

1. Form your barn yard with a gradual descent to one side, so that the liquid formed by the rains will flow gently to that side: make the bottom as hard and smooth as possible, that there may be little or no waste by soaking into the earth. Arrange your stables, hog pen, &c., in such order, as to throw all the litter and manure into the yard.

2. Sink a vat or reservoir to the lower side of the yard, of sufficient capacity to contain the juice of the yard. The most common form of the vat is six feet width by three feet deep, and twelve or more in length, according to the size of the yard, and the amount of liquor flowing from it. When the vat is more than twelve in length, it will be best to divide it by partitions into two or three parts, so that if at any time you want to use only part of the liquor, you can do so without any inconvenience. It will be further desirable to have the vat so connected with the yard, that when once full, and you have commenced your manufacture, if additional rains come before you shall have completed your heap, of which we shall soon speak, you can prevent the liquid so formed from running into your vat, either by keeping it back in the yard, or by turning it another direction.

3. In this vat mix the following ingredients as nearly as you can, without actual measurement or weight: to every barrel of liquid add 4 lbs. of stone lime just slacked, 4 lbs wood ashes good quality and dry, or an equivalent of leached ashes, or 1-4 lb. of salt, or its equivalent of brine; 2 ozs. salt petre; 20 lbs. plaster of Paris, or mud, or muck; 10 lbs. of excrements from the privy, or 20 lbs. of horse manure. Mix these ingredients thoroughly with the liquid in the vat, and if the vat contains one hundred barrels, increase the above ingredients an hundred fold. It would be well to mix these ingredients a few days before you lay up your heap, and stir them every day, but this is not essential.

4. On the upper side of the vat lay the foundation for the heap, by placing poles or rails, with one end to the vat, and the other extending from it, about 2 feet apart; on these lay other poles crosswise, (precisely as we do the foundation for a stack of hay or grain) to keep the straw from the ground, and that the liquid may flow freely beneath.

5. Having every thing prepared, commence laying up the heap by placing a layer of straw, weeds, stalks, or whatever you have at hand, on the foundation of poles, to the thickness of a foot. You will find great advantage from throwing the materials as you collect them in the yard and letting the cattle tread on them, until they are thoroughly wet. When the layer is a foot thick, stir up the ingredients in the vat and with a pail or other vessel, thoroughly wet the layer on the poles. Place another layer on the first, and of the same thickness wet as before, and thus continue until you have raised the heap as high as you wish---say from six to ten feet. Be careful at wetting to stir up the ingredients from the bottom of the vat. The easiest and quickest way to wet the several layers, will be to use a pump, or elevate, with a hose attached, to spread the liquor over the heap. In such a case, let one stir, another pump, and a third manage the hose. Only be careful, whatever method you pursue, to wet the several layers thoroughly in all their parts. When finished, cover the heap with settlings in the bottom of the vat, or with anything else at hand---common earth will answer.

6. If the heap consists of straw, weeds and the like, it will require wetting every fourth day. If you have used much peat, muck, or earth, with the straw, water once a week. To water the heap, make holes with an iron bar or other instrument in the top of it, from eight to twelve inches apart, and extending downward about to the middle; then stir the liquid in the vat, and pour it into the holes until the hole is saturated; finally close the holes. At every watering make new holes.

Give the heap three waterings when made of straw, and it will be fit for use in fifteen days from the time of laying it up, when much muck or mud has been added, thirty days.

When it is desired to manufacture this kind of manure in places where barn yard liquid cannot be readily obtained, river, spring or pond water, will answer the same purpose for wetting the heaps as the barn yard liquid, by increasing in a small proportion, the ingredients for the mixture, as given in section 3, and adding them to it.

Raleigh (N. C.) Star.

LIME.

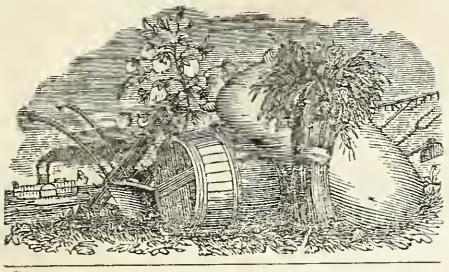
A gentleman in Virginia said, three years ago, that he had taken the Cultivator one year, but would never take it again. But why this hostility to the Cultivator? Is it not the farmer's friend? "Yes, it had my confidence; it recommended the putting of lime on land, and I followed the recommendation, and lost fifty dollars by it. I put on 80 bushels to the acre, and it is all lost, worse than lost, for it injured the land."

But what is the sequel of the case before us? Why, the lime has had time to be well mixed with the soil, has proved itself to be equal to all that was claimed for it in the once execrable article, and the gentleman now thinks he will not be fifty dollars the worse but one thousand dollars the better for taking the Cultivator. It is needless to tell you he is now an advocate for agricultural papers.

Permit me here to mention another instance of the value of calcareous manure. Major A. Stuart, Augusta county, Virginia, four years ago, gave a part of a field a liberal dressing, (the quantity per acre I don't know,) of marl, which is abundant on his farm. The first year he noticed its effects carefully, hoping to see an improvement in the crop, but he was disappointed, for the effect he thought was rather injurious; and being thus disappointed, he concluded the marl was worthless to him, and don't recollect to have noticed any effect from it the second year; but the third year he was called upon by such visible tokens of improvement in the c'over crop, which was on the field, that he could no longer be indifferent about the marl. This year, the field being in wheat, he found the improvement still greater, the difference being as three to one in favor of the marled portion of the field, and this difference being attributable wholly to the action of the marl. This soil is a ferruginous clay, abounding in lime rock, which, as you are aware, is the case with most of the land in the valley of Virginia. Is it not a general opinion, that on limestone land calcareous manures are not beneficial?

Cultivator.

BEES.—To prevent the moth laying its eggs under the hive, I have for the last several years cut a mortise in the bench about an inch deep and about two inches larger than the hive, and the hive is then set in this mortise, and the space of about one inch all around it is filled with mortar, then three-inch auger-holes are bored in the hive about two inches from the bench, for the egress and ingress of the bees, and a small auger-hole through the bottom of the bench to let off water. should any get under the hive. I have near night watched the moths, attempting to enter through these holes, and seen the bees chasing them away.—*Southern Planter.*



WEDNESDAY, FEBRUARY 21, 1844.

THE BACK VOLUME.

All new subscribers who may desire it, can obtain the first volume, neatly bound in boards, at one dollar the volume.

W. W. Bates, of Eufaula, Barbor county, Ala., writes us thus:

The neighborhood in which I live, have lost a great many hogs and cattle, during the last fall and the present winter, by turning them into pea fields. Peas grown upon the hammocks, as well as upon the uplands, have been alike destructive to stock. If a remedy cannot be given, we shall have to abandon the raising of peas. If you or any of your readers know a remedy, please inform us through the Cultivator.

The destruction of hogs and cattle, by turning them into fresh pea fields, is not very uncommon. The remedy, however, is very simple. Stock, immediately before being turned upon a pea field, should be watered, and at first only be permitted to remain in the field a few hours, when they should be removed to a lot, and have free access to water. After observing this precaution twice or three times, they may be permitted to remain in the pea field constantly, without danger, if they have free access to water.

To ascertain the weight of a Hog.—Mr. John Farrar, of Putnam county, furnishes us with the following method of ascertaining the weight of a hog, which may be of use to those who have a hog too heavy to be weighed by any steelyards at their command. He says it is sufficiently accurate for all purposes, except in buying or selling the pork:—"Cut the head off in the usual way, about 1½ inches behind the ears—weigh the head and multiply by ten, and the product is the weight of the hog. I have tried it frequently, and have found it correct to a fraction oftener than otherwise."

Mr. Editor—Believing that it will afford you a high degree of satisfaction to learn that the circulation of your paper among us, is exciting much greater interest in the subject of agricultural improvement than has been manifested heretofore, I take pleasure in communicating the intelligence, and to assure you that among its readers a general inquiry has been excited, and a disposition to adopt a more enlightened system of management evinced.

This augurs well for the success of your efforts, and I trust a similar spirit may be infused into the citizens of every county and neighborhood. We may then calculate with certainty that the day is not far distant when our people will be contented and happy, while their fields are teeming with the abundant harvests of an enlightened system of agriculture.

Pardon the digression, Mr. Editor, and indulge me in a few brief remarks to my brother planters, on a subject which not only interests them, but the entire country. We are rapidly passing from a period of almost unexampled depression to one of glowing prosperity—and it is to be feared, greatly feared, that we will, in the full tide of successful experiment, too soon forget the scenes through which we have just passed. "Times are getting better with us," is a remark which meets our ear almost every hour. 'Tis true as 'tis commonplace—every class of society and every branch of business attest its truth—property of all kinds is rapidly advancing in value—confidence is restored, and men are daily embarking in new enterprises, or seeking new investments for their capital. This is no imaginary picture, and I need only mention one species of property in support of its truth: slaves are from 30 to 50 per cent. higher than they were twelve months ago. What I desire, then, is to speak to my brother planters in a voice of warning—to admonish them, ere it is too late, to avoid the dangers attendant upon such a state of prosperity. To many, such an admonition need not be given: they are already forewarned, and therefore forearmed. But there are others to whom it may be beneficial—for I fear there are too many men who, like the schoolboy, forgets his lesson of yesterday, however well he may seem to have understood it while reciting. My advice to all such is, look back, survey again and again the scenes of depression and misery and want, through which we have just passed, and be certain not to forget the lesson which the results of a few years of prosperity have taught us. Going in debt in prosperous times, may be justly compared to a man navigating a boat on a smooth current down stream—it requires little effort, and all is bright while the water is undisturbed by a commotion of the elements, or unchekered with shoals or rapids: he floats on, unconscious of the danger which is so soon to overwhelm him—and when once in debt, and reverse after reverse succeeds each other in rapid succession, and he is compelled to pay those debts which have been created in prosperous times, by the hard earnings of his labor, when every thing is depressed—he may be justly compared to the same navigator, pushing his boat against a strong current in rapids among shoals: danger and ruin stare him in the face at every step: he has no repose, no quiet—but his labor is one of increasing diligence. If an oar or pole give way, the boat is driven back by the force of the current, and a double effort becomes necessary to regain his lost position—and he escapes, if ever, worn down and exhausted with the perplexity and vexation of spirit.

Mr. Editor, we are just emerging from the shoals of adversity, and our future voyage promises a rich reward to the provident! Let us, then, beware! beware!

A Friend to Economy.

A printed thought never dies. Nothing is so indestructible. The proudest works of art crumble to dust, but the eloquent thought lives, and will live down to the end of time.

Agricultural Debating Society.—The Sandersville (Ga.) Telescope says:—A highly commendable scheme for mutual improvement, has recently been adopted by some of our farmers in this neighborhood, in the shape of a Debating Society—in which questions of agricultural policy, alone, are debated. It strikes us that no more desirable plan could be hit upon, than this, for the dissemmination of useful information among practical farmers.

THE FARMER'S LIFE.

The following extract from the address delivered by the Hon. Mr. Saltonstall, before the Essex county (Mass.) Agricultural Society, descriptive of agricultural pursuits, will be appreciated by every virtuous mind.

Agricultural pursuits in the open air, in the pure breath of heaven, and amidst the works which God has made, have the most purifying and elevating influence on the heart and mind. Who that has a heart in his bosom, can look abroad on our hills, crowned with trees, our pastures covered with flocks, on our valleys and plains, laden with "food for man and beast," and not think and feel, how good God is? Who can behold the meadows ornamented with flowers, and reflect that the wide spread prairies, the solitary wilderness, nay, that the whole earth is strewn with an infinite variety of those most lovely objects, arrayed with more beauty than was Solomon in all his glory, and his heart not be softened into a sense of that boundless love, which has made such provision for our enjoyment, and for the gratification of a pure and refined taste? Who can see the sun rising in his glory, as all good farmers are wont to do, or can behold him sinking in his gorgeous pavilion—who can look upon the magnificent heavens, which can only be seen in the country, and not feel awed into reverence before Him who made all, and exclaim as did the shepherd of Israel—"When I consider the heavens, the work of thy hand, the moon and stars which thou hast ordained, what is man, that thou art mindful of him, or the son of man that thou visitest him?" Who can listen to the "charm of earliest birds" as they dart from their nest and mount to the topmost sprays at dawn, and not join their notes of grateful praise to him who notices the sparrow's fall, and whose providential care extends to all his works? And where shall we learn our dependence on divine providence so effectually, as in an occupation where his visible presence seems manifest, in his imparting the influences of the sun and o showers in such succession as to crown with success the labors of our hands—who withholds the needful blessings only so long as is necessary to make us feel, that "it is God who giveth the increase."

Farmers of Essex, you cannot render a greater service to your country, than by disabusing the public mind of any prejudices which still remain as to the true character and influence o your pursuits.

"Such themes as these the rural Maro sung
To wide imperial Rome, in the full height
Of eloquence and taste, by Greece refined.
In ancient times, the sacred plough employed
The Kings and awful fathers of mankind;
And some, with whom compared, your insect tribes
Are but the beings of a summer's day,
Have held the scale of empire, ruled the storm
Of mighty war: then with unwearied hand,
Disdaining little delicacies, seized
The plough, and greatly independent, lived."

A Piggery.—A "long-drawn aisle" extended from end to end of this establishment, along the middle; and on either side of this aisle were suits of rooms for the different madams and their young families of porkers, the troughs being on the side next the aisle, so that each apartment could be fed from the centre. The entrance to each apartment or pen, was by a gate opening on the outside.

Southwestern Farmer.

QUANTITY OF LIME PER ACRE.

We have repeatedly taken occasion to advance the opinion, that a much less quantity than 100 bushels of lime, per acre, would answer for all present purposes—and we have as often stated that an application of 25 bushels, if repeated at the expiration of each rotation of four years, until one hundred bushels had been applied per acre, would be better than applying that quantity at a single spreading; first, because the lesser quantity would be more than sufficient to meet all the demands of the crops for a period of years; and secondly, because, as the *outlay* would be diminished three hundred per cent, a much larger quantity of land could be dressed with it, and the farm, therefore, at an earlier period, and at much less expense, be brought into a state of profitable fertility. And as the *heaviness of the cost* forms a very serious objection to many persons undertaking the liming of their lands, we shall state a few of the many reasons which induce us to adopt the views of the subject we have heretofore felt it to be our duty to advance.

From the tests of analysis, it has been very clearly ascertained, that the crops, in a four years rotation, extract from the soil, on an average, about 242 lbs. of lime, which is 60½ lbs. per year. Some crops, we are aware, require more than others, but the average is set down as we have before stated. If, then, it requires but 60½ lbs., which is less than a bushel, to supply the plants grown on an acre, in a year, with the proper quantity of this particular kind of food, the inference is a fair one, that unless a *mechanical amenament* of the texture of the soil be an important object with the improver, there can be no positive necessity for the use, at any one time, of 100 bushels of lime upon a single acre, and the deduction is equally *fair*, that, as less than a bushel is given out in food to the plants in any one year, it would be preferable to use the hundred bushels on four acres, instead of one. By this division of he largest quantity named, the improver would be enabled by the increased products, to carry on his liming, and thus relieve himself from much of the onerousness of outlay, where heavy dressings are at first given.

Practical observers, as well as scientific men, have affirmed, that *visible good effects of lime* have been witnessed thirty years after its application; and we have no doubt of the fact. For, although much is lost to cultivation by the tendency of the mineral to sink beyond the reach of the roots of most growing crops, yet it must be obvious that, if less than a bushel is annually taken up by the plants, an application of one hundred bushels to an acre would last for a period greatly beyond thirty years. The question then resolves itself into this: If 25 bushels will answer for a series of years, equally as well as an hundred, why should the heavy expense of the latter be incurred. We make this suggestion purely as a matter of *economy;* and not because of any fears we entertain that a hundred bushels per acre, could, under any circumstances, operate disadvantageously to the soil, provided there were sufficient organic remains in it for the lime to act upon, or that animal and vegetable manure were applied, or green crops ploughed in. Lime, as a means of restoring fertility to an exhausted soil, is among the most efficient agents which can be used; and we hold, that without it, no permanent melioration can be effected, and for these simple and obvious reasons—all analysis prove that lime is to be found in the ashes of most of the vegetable productions, and therefore forming, as it does, a part of their food, it is essential that it should be in the soil, in order to secure a healthful growth of the plants raised thereon.

American Farmer.

Always have some worthy end in view, in whatever you undertake; remembering that to fail with good intentions, is more honorable than success in an evil cause.

Cultivator.

CONTENTS OF THIS NUMBER.

	PAGE.
Address of Hon. Charles Dayan,	26
Artichokes, Jerusalem	28
Bees,	30
Cotton Growing	30
Farmer's Life	31
Gardening,	27
Hogs, to ascertain the weight of	31
Indian Corn, sowing broadcast	29
Lime,	30
Lime, quantity per acre,	32
Lime, use of	29
Manures, new mothod of making	30
Old Fields, improvement of	29
Piggery,	31
Speech of Col. Leitner,	25
Terms, explanation of	27
Turnep Fly,	29
Vegetables, use and preparation of food of	26

AUGUSTA MARKET.

TUESDAY P. M., February 20.

Cotton.—Our market, for the last few days, has been in such an unsettled state, as regards the views of buyers and sellers, that very little has been done—and that little at rates so irregular, that we omit our usual quotations. Both parties seem in a state of suspense, and have generally determined to await the arrival of the Steamer of the 4th instant, from Liverpool; the news by which we expect the latter part of the week. If this news is favorable, it will give stability to our market, otherwise it will be greatly depressed.

Exchange.—Bills on New York, Charleston and Savannah, are abundant at par. Central money continues steady at 3 to 4 per cent. discount. We hear of no transactions in State 6 per cent. bonds, which seem to drag rather heavily upon the market.

TO HOG RAISERS.

THE subscriber offers for sale the JERUSALEM ARTICHOKE, which, by early application, can be obtained at his Store in Monroe, Walton county. The value of this article as food for Hogs, is no longer a matter of experiment or doubt. It has been fairly tested in Kentucky and Tennessee, and the Northwestern part of Georgia. They are required to be planted in the spring, and will be fit to feed in the ensuing fall and winter. I hazard nothing when I say not one-tenth of the corn now fed to hogs, is at all necessary; and, by the use of the artichoke, the use of corn, for hogs, may be entirely dispensed with through the whole winter. The first year, they are no more trouble than sweet potatoes: after that, they require no cultivation.

J. A. CLARK.

Monroe, Walton Co., Ga., Feb. 21. 2t

GARDEN AND FIELD SEED.

A GENERAL assortment of fresh and genuine GARDEN and FIELD SEED, among which are the following:

Red and White Clover,
Blue and Green Grass,
Rye and Orchard do.,
Timothy and Herds do.,
Millet and Luccrne do.,
Seed Corn of every valuable variety,
Seed Wheat,
Buckwheat and Potato Oats,

Kept constantly on hand by the subscriber, all of which are offered for sale at very moderate prices. All orders, by mail or otherwise, executed with neatness and despatch.

WM. HAINES, JR.,
No. 232 Broad street, Augusta, Ga.
August 30. 18-tf

CHEAP AND FRESH GARDEN SEED.—A large and select assortment of fresh Garden Seed, of this year's growth, (1843,) put up expressly for this market, and warranted genuine. Just received and for sale cheap by j9 tf WM. HAINES, Jr.

AUGUSTA PRICES CURRENT.

Bagging, Hemp	yd.	16	@	20
Tow	"	15	@	18
Gunny	"	18½	@	20
Bale Rope	lb.	9	@	10
Bacon, Hog Round	"	6	@	7
Hams	"	7	@	10
Shoulders	"	4	@	7
Sides	"	6	@	8
Coffee, Green prime Cuba,	"	9	@	10
Ordinary to Good	"	7	@	9
St. Domingo	"	7	@	9
Rio	"	9	@	10
Laguira	"	8	@	10
Porto Rico	"	9	@	10
Java	"	12½	@	14
Corn	bush.	45	@	50
Flour, Canal	bbl.	6 00	@	7 00
Baltimore	"	5 50	@	6 00
Western	"	5 50	@	6 00
Country	"	4 00	@	5 50
Feathers	lb.	20	@	25
Iron, Russia	cwt.	4 50	@	5 00
Swedes, assorted	"	4 50	@	5 00
Hoop	"	7 00	@	8 00
Sheet	"	7 00	@	8 00
Nail Rods	"	7 00	@	8 00
Leather, Sole	lb.	18	@	25
Upper	side	1 25	@	2 50
Calf Skins	doz.	18 00	@	30 00
Molasses, N. Orleans	gal.	28	@	35
Havana	"	25	@	30
Nails	lb.	4½	@	6
Oats	bush.	37½	@	50
Peas	"	62	@	75
Sugar, New Orleans	lb.	7	@	9
Havana, white	"	11	@	12½
" brown	"	8	@	9
Muscovado	"	7	@	9
St. Croix	"	8	@	11
Porto Rico	"	7	@	10
Lump	"	13	@	14
Loaf	"	13	@	15
Double Refined	"	14	@	16
Salt, Liverpool ground	bush.	45	@	50
" "	sack	1 75	@	2 50
Steel, German	lb.	15	@	16
Blistered	"	8	@	12½
Twine	"	20	@	30
Tea, Bohea	"	50	@	75
Souchong	"	60	@	75
Hyson	"	80	@	1 25
Gunpowder	"	1 00	@	1 50

TURNEP SEED.

A SUPPLY of the following varieties of fresh TURNEP SEED just received, viz:

Yellow Sweedish or Ruta Baga, very fine for stock,
Large Globe Turnep, } Fine
" White Flat do. } for
" Hanover or White Ruta Baga do } table
" Norfolk do. } use.

For sale in quantities to suit purchasers, by
Aug. 30 18-tf WM. HAINES, JR.

THE SOUTHERN CULTIVATOR

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SOUTHERN CULTIVATOR.

VOL. II. AUGUSTA, GA., MARCH 6, 1844. No. 5.

From the New England Farmer.

EXTRACTS FROM MR. HUDSON'S ADDRESS

BEFORE THE WORCESTER AGRICULTURAL SOCIETY.

Connection between Agriculture and other Interests.

"Although agriculture is one of the earliest employments, and an essential ingredient in civilization, it is by no means an independent calling. Every human pursuit, like man himself, is dependent upon its fellow. Agriculture, manufactures, and commerce, the three great pursuits of mankind, are equally honorable employments, all conducive to the public good, and each essential to the prosperity of the other. Commerce could not exist without agriculture and manufactures. Unless the sails, the cordage, the anchor, the ship itself, were manufactured, how could the ocean be traversed? Without agriculture, how could the hemp be grown, the ship provisioned? And what is the cargo of the merchant but the products of the soil, or the fabrics of the workshop? Commerce is entirely dependent upon agriculture and manufactures. The ship could not be built without the mechanic; the canvass could not float without the assistance of the plow.

There is also an immediate and inseparable connection between agriculture and manufactures. The mechanic must furnish the tools—must manufacture the implements of husbandry, or the labors of the husbandman will fail. The plow must be constructed before the furrow can be turned; the scythe must be manufactured before the grass of the meadow can be laid low. But what calls for the construction of the plow, the scythe, or the sickle, but the wants of the husbandman? And what sustains the mechanic while constructing these implements, but the products of the soil? The mechanic or manufacturer could not subsist without the produce of the farmer; the farmer must have the tools, the clothing, the shelter, furnished by the manufacturer or mechanic. Agriculture and manufactures are intimately connected, and whenever, by their mutual aid and succor, they rise and flourish, commerce becomes necessary for the interchange of their commodities. The man who, from undue attachment to either of these pursuits, would separate it from the others, that it might stand 'alone in its glory,' would show no more wisdom than he who, from partiality to one member of the human system, would separate it from the body, by which it is nourished and sustained."

Which should be the most numerous class, Agriculturists or Manufacturers?

"But although these great callings are important to the country, and mutually beneficial to each other, to be productive of the greatest good there should be a due proportion between them. Agriculture may be regarded as the parent calling. Upon the earth, as a nursing mother, the human family must mainly depend for sustenance. The agriculturists, therefore, should be the most numerous class. They are the foundation upon which all other laborers must rest.

It has sometimes been a matter of complaint by the farmers, that so many of our young men abandon agriculture, and engage in other employments. It may be truly a matter of regret, so far as the welfare of the young men is concerned, but the interests of agriculture are not impaired by this course. The profits of farming must depend mainly upon the price of produce, and this price will be regulated by the demand. Every one, therefore, who leaves agriculture for some other employment, by ceasing to be a producer, and becoming a consumer, increases the demand for agricultural products, which tends to enhance the price. How, then, is the farmer injured? He sustains no pecuniary loss whatever. The injury, if any is sustained, is done to the calling into which they enter; for a surplus is there created, which, to that calling, may prove detrimental."

Importance of a Market to the Farmer.

"The great object with the farmer is, to find a market for his produce. It is to no purpose that he raises more than he consumes, unless he can dispose of the surplus. And who are his purchasers? Not those engaged in the same pursuit with himself: they have generally enough and to spare. His purchasers must be found among the manufacturers and mechanics, the merchants and traders, and those engaged in other callings than agriculture. * * * Every thing which increases population, enhances the value of the soil, and promotes the interest of those who cultivate it. The price of land depends materially upon its proximity to a market. Go through the country, and you will see lands of the same intrinsic value, selling for agricultural purposes, at prices ranging from two dollars to two hundred dollars per acre, when the main consideration which affects the price is, their situation with reference to a market. Wherever or whenever a village springs up from manufacturing or any other cause, the price of land is increased for miles around. Not only do the great staples of agriculture increase in value by the proximity of a market, but a thousand little nameless articles assume a value unknown before. Gardening is introduced, milk is disposed of at great profit, the summer and fall fruit, before nearly useless, now command a good price, wood is quadrupled in value, and even the stones are converted into bread."

Attempting the cultivation of too much Land.

"The farmers generally attempt to cultivate too much land. The disadvantages arising from this cause, are many and obvious. It is no exaggeration to say, that the lands cultivated in the county are capable, under a high state of cultivation, of producing twice as much as they now produce. This applies, we will suppose, not to the pasturing, but to the arable land alone. The farmer, then, in the purchase of his land, might save, say, one-sixth of his original outlay in the reduced quantity of his arable land. The sum thus saved, would enable him, in the first instance, to put his land in such a state of cultivation, as would in a few years double his crops per acre. Nor would the annual cost of cultivating an acre of land in this highly improved state, be materially increased. The cost of plowing, planting and hoeing an acre of ground capable of producing fifty bushels of corn, would be no more than though the land were only capable of producing twenty-five bushels. * * Take the average of all the upland mowing in the county, and the yield will not probably exceed 1500 of hay to the acre. And three-fourths of this land is capable of yielding two tons to the acre. Let the farmers reduce the quantity of their grass land two-thirds, and they will find that, with skilful cultivation, they save one-half of the labor, and still obtain their usual quantity of hay. * * Let the farmers of the county reduce the amount of their cultivated lands, take special care to increase the quantity and quality of their manure, and adopt a wise rotation of crops, and they will soon find that lands which now 'mock their scant manuring,' would soon yield a plentiful harvest, and richly repay their toil. Let them adopt the best system of husbandry, and this would prevent the emigration of our farmers to the West. They would soon see that the rugged soil of New England, under skilful culture, is, when taken in connection with New England comfort, New England institutions, and a New England market, to be preferred to the more fruitful prairies of the West, where the productiveness of the soil contrasts so fearfully with the domestic comfort of the inhabitants, and the worth of their literary and religious institutions. Who, that reflects upon the subject, would be willing to exchange the comforts of a New England farmhouse, and the refinements of New England society, for the privations of a log-hut in the wilderness? Who would not endure the summer's heat and winter's cold common to our climate, rather than the burn and chill of the ague-fever?"

False estimation of Agriculture.

"The first obstacle in the way of agricultural improvement, which I shall mention, is the low estimate which has been put upon this calling. It has too often been regarded as an employment that requires nothing but physical power—mere brute force; and consequently, if a young man exhibited any considerable degree of talent, he must be put to some other calling. The natural tendency of this has been, to degrade agricultural labor, and to impress upon those who had any aspirations after distinction, the impolicy of groveling in the dust, as cultivating the soil has sometimes been regarded. The effect of this has been to draw talent away from agriculture, and to create an impression that the calling was not as respectable as some others. Many a young man has been driven from agriculture, and brought to ruin by this cause. And if it were not ungallant, I would say that some of our young women, faultless in every thing else, have been so far deceived as to prefer a husband employed in other pursuits than agriculture. But the reverses which have attended other pursuits, will, I trust, soon teach them that the permanent home of the farmer's wife is greatly to be preferred to the changing abode and variable fortune of many other classes of our citizens. * * Agriculture is no mean employment. It was the first into which our race entered, and it is the last which can be abandoned. It has commanded the attention of some of the wisest and best men of ancient and modern times. Cincinnatus, renowned in war, was not ashamed to follow the plow; and the estimate which posterity has put upon his worth is such, that the *farmer* has thrown the *General* into the shade. And in our own country, to mention but one example, the Farmer of Mount Vernon was the Father of his Country. Who, then, would disdain a calling pursued by the wise and the good—a calling essential to the well-being of society, conducive to public virtue, promotive of health and happiness, and one to which Washington was proud to retire, from one of the highest stations ever conferred by man. But modern discoveries have made ag-

riculture more attractive than formerly. Now the application of science renders it an *intellectual* employment; so that the laborer may improve his mind while improving his soil, and cultivate his heart as well as his farm."

We conclude our extracts with the closing paragraphs of the address, in which a merited tribute of respect is paid to the late Corresponding Secretary of the Society, Wm. Lincoln, Esq.:

"Gentlemen of the Society: Your calling, important as it is, should never be permitted to interfere with higher pursuits. There is a culture more important than that of the soil. The intellectual and moral field requires our utmost care. We are but plants, which rise and blossom and decay. That 'all flesh is grass, and the goodliness thereof is as the flower of the field,' is forcibly impressed upon us at this time, by a recent instance of mortality among the officers of this Society. In the death of their late Corresponding Secretary, the Society has sustained a severe loss. Actively devoted to the cause in which you are engaged, he brought the treasures of his rich and well-cultivated mind, and laid them a willing offering at our feet. No duty was too arduous for him to perform—no sacrifice too great for him to make in the cause of agriculture. Attached to your Society by sympathy, by long and active labor, he was one of your most valuable members—among the most faithful of your officers. No want of the Society ever escaped his attention: he preserved all her interests with a fostering care. His labors always contributed to the interest of our exhibitions; and his presence on each returning anniversary, was hailed with joy by a large circle of devoted friends.

But the heart which was warm with every generous emotion, has ceased to beat. The tongue which could instruct or amuse us, is silent in death. The place which he filled with so much honor to himself and profit to the Society, is now vacant. We shall see our friend no more. But as long as courtesy and kindness are regarded with favor; as long as talent and genius command our respect; as long as benevolence and generosity deserve our commendation, or industry and fidelity are esteemed as virtues, the memory of WILLIAM LINCOLN will be cherished."

From the New England Farmer.

DANA'S PRIZE ESSAY ON MANURES.

Extract from the Report of the Committee appointed by the Trustees of the Mass. Society for Promoting Agriculture, to award the Premium for the best Dissertation upon Manures, and their application to the various Soils in this Commonwealth.

The author of the following Essay upon the application of Chemistry to Agriculture, is known to be one of the most scientific and best practical chemists of the country; a man of genius; a gentleman, too, who has done more to advance the science of Chemistry as applied to Agriculture, than any other man in America. It is intended to be written in plain language, such as most farmers can understand, if they give their attention to it. The principles laid down are generally such as are well established, and no longer doubtful. The great object, however, of the Essay is, to bring into more general notice a theory, and a practice growing out of it, suggested some years since by the author, which has received the sanction of some of our practical farmers, who have tried it under his direction.

If the author is correct, common peat, when mixed with soda, potash, or ammonia, in the proportions given by him, would be, on most soils, equal, as a fertilizer, to the common manures used by the farmer.

Should his views be hereafter fully sustained by experiment, it will lead, we think, to the greatest improvement that has ever taken place in the Agriculture of the State. A cord of peat earth can often, with us in Massachusetts, be obtained from the meadows, as easily as a cord of manure from the barn-cellar; and one dollar's worth, or twenty pounds of soda ash, would, according to the author, make the one equal to the other.

The theory on which the author founds this practice is, that potash or soda may be substituted for each other and for ammonia in the compost heap, without detriment. To this theory we cannot, at present, subscribe. But whether they adopt this theory of the author's or not, most of our farmers who may read this Essay, will, we believe, receive both profit and pleasure from the perusal.

We therefore recommend, that the Society's premium of *One Hundred Dollars*, be given to Dr. Samuel L. Dana, for the best Dissertation upon Manures, and their application to the various soils of this Commonwealth.

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ESSAY.

SECTION FIRST.

Clearing and Breaking up, and making Compost.

There is one thing settled in farming—*stable manure never fails.* It always tells. There are no two ways about it. There is here neither theory, nor speculation, nor doubt, nor misgiving. "Muck it well, master, and it will come right," is an old proverb. It is considered a fact so well established, that nobody thinks of disputing it. There is advantage in asking *why* barnyard manure never fails. The answer is easy: It contains all that plants need for their growth. If we know, then, what plants contain, we can easily tell what is in manure. The whole doctrine of manures, then, falls into two plain principles, on which hang all the law and the "*profits*" of agriculture.

1. Plants contain and need certain substances which are essential to their growth.

2. Manure contains all those substances which plants want.

If, then, we would find out what it is which manure contains that makes plants grow, we must first find out what a grown plant contains. This cannot be done without some little, a very little, knowledge of chemistry. Do not be startled, reader. I suppose that you may know nothing of chemistry—no, not even its terms.—As a very sensible man, who wrote letters on Botany to a young lady, said, to encourage his pupil, it was possible to be a very good botanist without knowing one plant by name, so is it possible to become a very good agricultural chemist without knowing little more than the chemical names of a very few substances. You know nothing of chemistry, it may be, and as little of law; yet you will go to law, and learn some of its terms by a dear-bought experience. The law terms are harder to learn than the chemical terms. Now I fear that some persons who have followed me thus far, will shut up the book. It is, they say, all stuff, book-farming, and beyond us. If one may not understand what manure is without this learning, we may as well begin where our fathers ended, and that was where our forefathers began ages ago. By a little law, however, picked up as a juryman, or witness, selectman, town-clerk, justice of the peace—yea, perhaps, by hearing an indictment read—men do come to understand what a lawyer means when he talks. So, too, by a little chemical talk, a man may learn what a chemist means when he talks of oxygen, hydrogen, nitrogen, chlorine, and carbon; potash, soda, lime—(all these are old friends; the very names make us feel at home again)—alumina, magnesia, iron, manganese, and silex, sulphur, and phosphorus. Here is a long list. Long as it is, perhaps it will be thought worth learning, when you are told that these are the names of all the substances found in plants—every substance which they want. Out of these is made every plant. Every part of every plant, from the hyssop on the wall to the mountain cedar, contains some or all of these. Be not disheartened. Look over, reader, the list again carefully; see how many are old names of things which you know. Of the fourteen, you know nearly one half by name and by nature. These are, potash, soda, lime, magnesia, iron, sulphur. Perhaps you will add, that you know carbon is coal, or rather coal carbon. You have heard, from some travelling lecturer at your town lyceum, that oxygen and hydrogen together form water; that oxygen and nitrogen form the air you breathe; that nitrogen and hydrogen form ammonia, or sal volatile, which gives the sharp smell to the smelling-bottle. Besides, the thing has been said so often, that you must have heard it, that chlorine, the substance which bleaches in bleaching salts, united to soda, makes common salt, or if chlorine is united to ammonia, sal ammoniac is formed. Now, by changes and combinations among these fourteen things, nature makes every thing we find in plants. Many of these are invisible to us, as is the air. The substance called chlorine, perhaps you have never seen, but if you ever smelt it you will never forget it. It is often smelt in a piece of bleached cotton, when opened in the shops. It gives the smell to bleaching powder, used to disinfect the air during cholera and other diseases. If you could see it, it would appear merely a feint yellowish green air. It is all-powerful on vegetation. As it forms a part of common salt, say half of its weight, we may dismiss the further consideration of it by saying, that, in some shape or other, chlorine is universally diffused in soil and plants.

The list above may be divided as follows: first, the airy or volatile; secondly, the earths and metals; thirdly, the alkalies; fourthly, the inflammables. Only the third and fourth divisions require to be explained or defined. The substances called potash and soda, are termed alkalies. They are said to have alkaline properties. Touch your tongue with a bit of quick lime, it has a hot, burning, bitter taste. These are called alkaline properties. Besides these, they have the power of combining with, and taking the sour out of, all sour liquids or acids—that is, the acid and the alkali neutralize each other. This word alkali is of Arabic origin: its very name shows one of the properties of alkalies. "Kali" is the Arabic word for bitter, and "al" is like our word super—we say fine and superfine; so kali is bitter; alkali, superlatively bitter; or, truly alkali means the "dregs of bitterness."

I wish, reader, for your own sake, as well as my own, that you should fix in your mind what I have said about alkali and alkaline properties. Alkali is a general term. It includes all those substances which have an action like the ley of wood ashes, which you use for soap-making. If this ley is boiled down dry, you know it forms potash. Now lime, fresh slaked, has the alkaline properties of potash, but weaker, and so has the calcined magnesia of the shops, but in less degree than lime. Here we have two substances, earthy in their look, having alkaline properties. They are called, therefore, alkaline earths. But what we understand chiefly by the term alkalies, means potash, soda, and ammonia. Potash is the alkali of land plants; soda is the alkali of sea plants; and ammonia is the alkali of animal substances. Potash and soda are fixed, that is, not easily raised in vapor by fire. Ammonia always exists as vapor, unless fixed by something else. Hence, we have a distinction among alkalies which is easily remembered. This distinction is founded on the source from which they are procured, and upon their nature when heated. Potash is vegetable alkali, derived from land plants; soda is marine alkali, derived from sea plants; ammonia is animal alkali, derived from animal substances.

Potash and soda are fixed alkalies; ammonia is a volatile alkali. Potash makes soft soap with grease, and soda forms hard soap. Ammonia forms neither hard nor soft—it makes with oil a kind of ointment used to rub a sore throat with, under the name of volatile liniment. But though there be these three alkalies, and two alkaline earths, I want you to fix in your mind, reader, that they all have common properties, called alkaline, and which will enable you to

understand their action without more ado about their chemistry.

The inflammables, or our fourth division, are sulphur and phosphorus; both used in making friction matches. The phosphorus first takes fire by rubbing, and this sets the sulphur burning. Now, the smoke arising from these is only the sulphur and phosphorus united to the vital part of the common air. This compound of vital air, or oxygen, as it is called, and inflammables, forms acids, called sulphuric and phosphoric acids. So if you burn coal or carbon, it is well known you form fixed air, or carbonic acid. That is, by burning, the coal or carbon unites with the oxygen or vital part of common air, and forms carbonic acid. The heavy, deadly air, which arises from burning charcoal, has all the properties of an acid. And now let us see what these properties are.

All acids unite or combine with the alkalies, alkaline earths, and the metals. When acids and alkalies do thus unite, they each lose their distinguishing properties. They form a new substance, called a salt. It is very important you should fix well in your mind this definition of a salt. You are not to confine your idea of a salt to common salt. That is a capital example of the whole class. It is soda, an alkali, united to an acid, or chlorine, or, to speak in the terms the most intelligible, to muriatic acid. So saltpetre is a salt. It is potash united to aquafortis. Yet in saltpetre you perceive neither potash nor aquafortiis. These have united—their characters are neutralized by each other. They have formed a neutral salt. Our list of substances found in plants, is thus reduced from things which you did not know, to things which you do know; and so we have saved the trouble of learning more of their chemistry.

We have reduced the airy or volatile into water, formed of oxygen and hydrogen; of volatile alkali, formed of nitrogen and hydrogen; or into acids, as the carbonic, formed of oxygen and carbon—as the sulphuric, formed of oxygen and sulphur—as the phosphoric, formed of oxygen and phosphorus; and having thus got water and acids, these unite with all the alkaline, earthy, and metallic bodies, and form salts. To give you new examples of these, I may mention Glauber's salts and Epsom salts. Glauber's salts is formed of soda and sulphuric acid; Epsom salts, of magnesia and sulphuric acid; alum, of alumina or clay, and sulphuric acid; green vitriol, of iron and sulphuric acid; white vitriol, of zinc and sulphuric acid; plaster of Paris, of lime and sulphuric acid; bones, of lime and phosphoric acid; chalk and limestone, of lime and carbonic acid. These are all examples of salts—that is, an acid, or a substance acting the part of an acid, united to an alkali, metal, or earth.

We have thus gone over, in a very general way, enough of chemistry for any one to understand the chemical nature of manure. You see, reader, that with common attention, bestowed for an evening's reading, one may learn these chemical terms and their meaning. And now, having learned this first lesson, let us review the ground gone over, and fix once and for all these first principles in our minds. Let us do this by a practical application of the knowledge we have gained.

Let us analyze a plant. Do not be startled at the word. To analyze, means to separate a compound substance into the several substances which form it. This may be done by a very particular and minute, or by a more general division. It may be done, for our present purpose, by separating the several substances of a plant into classes of compounds. You are already chemist enough to undertake this mode of analysis; in truth, you have already done it again and again. For our purpose, the ancient chemists had a very good division of all matter into four elements—fire, air, earth, and water. Now, by fire you separate plants into the other three elements. You are, reader, though perhaps you do not know it, somewhat of a practical chemist. Whenever you have burned a charcoal-pit, what did you? You separated the wood into air, water, and earth. You drove off by heat or fire the airy or volatile parts of the plant; you left its carbon or coal: if you had burnt this, you would have left ashes. Now, these ashes are the earthy parts of plants. If you burn a green stick of wood, you drive off first its water and volatile parts, which form soot. You burn its carbon, and leave its ashes or salts. So that, by simply burning, you reduce the substance or elements of plants to water, carbon, salts.

All plants, then, without exception, contain the several substances in our list above, as water, carbon, and salts. To apply this knowledge to manure, we must say a word on the form in which some of these, which we call the elements of plants, exist in them. The sap is water; it holds dissolved in it some salts of the plant. This sap or juice forms a pretty large proportion of the roots—say seventy-five to eighty parts in one hundred of potatoes, turneps, beets, &c. This may be called the water of vegetation. If we dry beet-root, or any other plant, we merely drive off this water of vegetation. Now what have we left? To go back to our process of analysis, let us char the dried root. We drive off more water and volatile parts. This water did not exist as such in the plant. It existed there as hydrogen and oxygen gas. Now, this word gas is a chemical term, and it means any substance in vapor, which cannot be condensed into a liquid or solid at common temperatures. Different gases may unite, and so become solids or liquids. Steam is not gas, for it is the vapor of water, and immediately returns to the state of water, below 212 degrees. Perfect steam is invisible; so are most gases. The air we breathe is composed of two gases, oxygen and nitrogen. We do not see them—we cannot, by cooling or compression, make air take other shape than invisible air. This is the general property of gas as distinguished from vapor or steam. Oxygen and hydrogen in plants exist in just the proportions to form water, but we do not know that they are united in these proportions. We have compelled them to unite by heating the substance or root. The carbon is by this same process consumed, and you know, has thus formed carbonic acid. Besides this, a portion of the carbon unites with some of the hydrogen of the plant. This forms light, inflammable air. Now you may collect this light, inflammable air, in any stagnant water where plants are decaying. Decay gives exactly the same products as are formed in making charcoal. Decay is only slow combustion or burning; no matter whether we char the plant or leave it to decay; we obtain exactly the same products as we did by our analysis, that is, carbon and salts.

But because there is not heat enough, we leave by decay a portion of the hydrogen and oxygen still united to the coal. A slow mouldering fire leaves products more like those of decay. Decay is a slow mouldering fire; hence the products of the decay of plants are very aptly termed mould. It is the product of a mouldering fire—that is, an imperceptible union of the oxygen of the air with the carbon of the plant,—a union so slow that it gives out neither heat nor light. And yet it is in its results the same as if fire had actually been seen and felt. Mould contains, then, a part of the carbon, oxygen, and hydrogen; or, if you like the terms better, mould of soil consists of the water and coal and salts of the plants. Mould is truly manure. If the mould of soil, as it has thus been defined, were separated from the earthy portions of soil, it would deprive that soil of the power of growing crops. Here, then, we come to a broad distinction between soil and manure. The soil is the earth on which plants grow. The mould is the manure of that soil. The soil is the earthy; the mould, that is, the carbon and salts together, with the elements of water, are the vegetable part of arable land. But though the earthy part, the soil, as it is usually called, acts as a support, on which plants grow, it does not play a merely mechanical part. It has a distinct, decided, and important action upon the manure. The action is chiefly chemical; and the fact that soils and manures do mutually affect the growing plant, is proved by the circumstance, that the first plants which grew, derived their salts from the earth.

But this chemical action of soil does not belong to the present discussion. We can understand what manures are, without deciding how they act. We can theorize and guess about the how of their action when we have learned what they are. That is chiefly what the farmer wants to know. He wants to know what manure is, and what is likely to act as a manure. To these points we shall confine our present remarks. Pointing out the great principles applicable to all manures, the nature of soils, and the manner in which they affect manures, must be left for another essay. The vegetable or manure part of soil alone is to be now considered. Consider, now, reader, the great results to which our analysis has led us; that a slow, mouldering fire gives us the same products as are formed by decay; that this is only a slow, mouldering fire, and that mould, its product, is the natural manure of plants. It follows, that whatever substance produces mould, that is, water, carbon, and salts, may be used instead of this natural manure. Among the salts found in mould, some are volatile, and are easily dissolved by water. Others are fixed, that is, not evaporating easily, or not at all, and are quite insoluble in water. Now the first, or volatile and soluble, first act when used in manure. They act quick and are quickly done. The fixed and insoluble act slower; they last longer. The volatile act in the early stages of growth; the fixed in the later periods. The great difference in the action of manures, depends almost entirely upon the salts which they contain. These are the most important and essential. It is not so much the vegetable mould of manure that you want, as the salts which it contains. This is a well settled principle. Land which has undergone the skinning process—old, worn out and run out land, still contains a very large portion of vegetable matter; the coal or carbon of mould without its salts. Give this worn-out land salts, and you may by these alone bring it back not only to its first virgin freshness, but you may even by salts alone make it fairer and richer than it was before man ever cultivated it.

Too much stress has been all along laid upon the kind of soil. Go now to "Flob," in West Cambridge: no better farms or farmers, look the world through. Ask any of these practical men whether the sandy and gravelly soil of Old Cambridge Common, or even of Seekonk Plain, can be made to bear as rich crops as their land? They will tell you, yea. If your land will hold manure, muck it well, and it will be as good.*

Now, this holding of manure belongs to the subject of soils, and throwing that out of consideration, it is found that even lands which do not hold manure, which have been worn out and exhausted by cropping, hold yet a great deal of insoluble coal or mould. They want salts, and something which will make this inert, dead vegetable matter of the soil, active. The mould is active in proportion as it is more or less dissolved by water. Mould consists of two parts; one is dissolved, though only in a light degree, by water; the other is not dissolved by water. Some substances, however, do render mould very easily dissolved by water. Hence, if you reflect a moment on these facts, it will be seen that mould itself, being valuable in proportion to the ease with which water dissolves it, that whatever substance so enables mould to dissolve, may be added to it, and thus increase its value. Now the things which do this are the alkalies, soda, potash, and ammonia.

These principles being well settled, we may enter on the consideration of each different ma-

*The reader will bear in mind that Dr. Dana uses "muck" as a general term for manure—not meaning simply the muck of the meadow.—Ed.

nure. They will be valuable in proportion to the quantity and kind of salts each contains, added to the power they may have of producing by their decay substances which make their mould soluble. Now, this last property, that is, the property of producing a substance which makes mould soluble, depends wholly upon the nitrogen of the manure. This nitrogen, in the process of decay, becomes volatile alkali, or ammonia. The word ammonia will occur so often in the present discussion, that we should endeavor to fix some definite idea to it. You need not, reader, be acquainted with all its chemical properties. I suppose every man who will be likely to read these remarks, has smelled ammonia. It has been already said, that it gives the peculiar pungent smell to the common smelling bottle. This is volatile ammonia. It is always formed when animal or vegetable bodies decay.

It has been already said, and is now repeated in order that it may never be forgotten, that ammonia is formed by the union of hydrogen and nitrogen. Hydrogen and nitrogen, two airs—nitrogen forming four-fifths of the air we breathe—let that be borne in mind, and without going into the chemistry of ammonia further, or the mode of calculating how much ammonia a pound of nitrogen will make, it may be laid down, and must be remembered, too, that every pound of nitrogen may be called two and a half pounds of sal volatile, or smelling salts of the smelling-bottle. Two and a half lbs. of volatile ammonia formed from one lb. of nitrogen. If, then, we can determine, as chemistry may, how much nitrogen exists in or forms a part of manure, two and a half times that will be the ammonia of that manure. If, then, the vegetable part of manure is, as we have said, valuable and active in proportion to its degree of being dissolved by water, then, as ammonia gives it this easy solubility, we may safely say that the quantity of nitrogen in manure, is the measure of the value of its vegetable part. One thing must be guarded against; not to place from this view the whole of the value of manure upon its ammonia. Remember that manure consists of carbon, water, and salts. The whole are equally essential to its action. There is no eye, nor ear, nor foot, nor hand, in manure, which may say to the other members, "I have no need of thee." The whole act together; but it is not to be doubted that ammonia is the heart of manure, and keeps up the healthy circulation among the other members.

(To be continued.)

From the Western Citizen.

PREMIUM ESSAY ON THE CULTIVATION OF CORN.

BY GEORGE W. WILLIAMS.

1. This Essay, although, in its application, it is intended for the Northern part of Kentucky, in its general principles may be adopted in all regions where corn can be produced.

2. Indian corn was not known in Europe till after the discovery of the New World. It was at first found by the followers of Columbus in South America, and it is supposed to have been cultivated in Mexico and Peru from time immemorial. It was introduced into England about the year 1505, is now cultivated wherever climate and soil are suitable, and is one of the most munificent gifts of the new to the old world. It is one of the staples of the United States, and in the great valley of the Mississippi is, next to cotton, the most important production of the soil. In the States of Tennessee, Kentucky, Missouri, Indiana, Illinois and Ohio, it is a product upon which the agricultural community relies for sustenance more than any other. It supplies to man and beast the most nutritious food, and it enters so completely into the economy of rearing stock, that it is believed a substitute cannot be found for it.

3. It is useless to raise corn upon poor or exhausted land. Land which is not fertile enough to produce 100 bushels to the acre, should not be planted in corn. To cultivate it in soils, which in the best seasons will not yield more than twenty-five bushels, and in ordinary seasons not more than twenty-five bushels to the acre, is an expenditure of labor to little purpose, and exhausts the soil in a ratio proportionate to its poverty. The best lands should always be selected for corn, and then if properly cultivated, such an average crop may be expected, as will amply repay the farmer for his labor.—Exhausted land put down to grass can be made more profitable by a proper system of grazing, than if kept in cultivation, and may be rendered in a few years as productive as the best.—One of the greatest errors in the present mode of cultivating corn, is to be found in the quality and quantity of land we undertake to cultivate. It takes many acres of poor land to make many barrels of corn: hence, we plant more than we can manage, and the result is much labor and a small crop. Good land, well cultivated, will yield heavy crops with half the labor. To correct this error, the attention must be turned to the improvement of exhausted lands, and to a more careful cultivation of those that are good, as well as to such a rotation of crops as shall keep the soil from deterioration. These subjects are not strictly within the scope of this essay, and will not be farther noticed.

4. There are many varieties of corn, and the farmer, in the choice of his seed, will have an eye to his location, the nature of his soil and climate, as also to the purposes to which he intends to apply the crop when matured. In Northern latitudes, the long-eared variety with large cob will not do, because it ripens slowly, and is liable to be injured by the frosts; and even here, it not unfrequently happens that varieties of this sort are overtaken by an early frost. If bread be the object, the best is a white, firm grain, easily shelled, and one that yields a pure white meal. In this, the farmer will, however, be governed by his own fancy, though experience will teach him that certain varieties are to be preferred for certain soils, and for particular purposes. My own judgment has led me to the cultivation of two kinds, one for meal and the other for stock, the latter of which has a small red cob, firm, deep, yellow grain, shells easily, and has commonly two ears to the stalk.

5. When the variety has been chosen, much care is to be exercised in the selection of seed, for it is an important consideration to have seed which will be sure to germinate; and will throw up a strong green plant from the start. Corn for seed should be of the best part of the crop as it stands in the field, and should be left standing until it has fully ripened. Let it then be taken from the stalk with the shuck on, and cribbed; or, if it is shucked, let it be kept in a dry airy loft. Most usually, where a stalk bears two ears, the top ear is the larger and better of the two. When the season for planting arrives, the whole is to be overhauled, and no ears should be chosen but those which are perfectly sound, and of good size for the sort. The grains must then be taken from each end of the ear, and those of the middle used for seed. I would recommend the grain to be planted as it comes from the ear, without any preparation to guard against insects or birds. The receipts offered for this purpose frequently injure the germ, and sometimes do more harm than either bird or insect. The best remedy against both is to plant early, and use sound seed. The character of the variety may be changed by a continued selection of the top ear from stalks bearing more than one ear, and if this be repeated for several years, the change, I think, will be for the worse. It will be found, although there will be an increase of the number of ears to the stalk, that their size will be diminished, the grains become shallow and flinty, and will adhere closely to the cob. I have, for several years past, made experiments of this sort, and ascertained that a continued selection of the top ear will produce these results. Baden produced his noted variety in this way, and I do not doubt but that it is greatly inferior to the variety from which he produced it. My plan now is to take the best ears whether first or second, and afterwards choose from among these, the most sound and perfect for seed.

6. I know of but one case in which it is proper for one crop of corn to succeed another, and that is upon land, which, being in sod, was prepared for corn with great expense and labor. In this case, the first crop, although it may be large, is not likely to be as heavy as the second, nor will it compensate for the expense of preparation. To prepare sod land for corn, it must be taken in hand early in the winter. As soon as the first thaw occurs after a hard freeze, it should be double-plowed, running one plow immediately after the other; the first turning over a thin surface of sod, and the one following, throwing upon that a thick slice of sub-sod, both plows together making a furrow from four to six inches in depth. I know of some excellent plows for this kind of work. My neighbor, Captain Wm. P. Hume, has in use a pair of his own invention that do the work to perfection. The Rugles's plow to be followed by Hay's Rounder, or with the Rounder, will do admirably. Sod land prepared in this way, mellowed by the latter frosts of winter, need, when the planting season arrives, only to be sirred with the harrow, before the seed is put in, and presents in fact the best possible prospect, if the soil is of the first quality, for a large yield.—Winter plowing of sod land is the only remedy against the ravages of the cut worm.

7. To prepare other lands for corn, whether stubble or fallow, deep plowing is the first desideratum, and the proper time for doing this, is as early in the spring as when the frost has left the earth, and it has attained a genial warmth, such as will cause the mould to leave the plow without difficulty. If stubble land be of a stiff, clay soil, and the stubble heavy, the stubble should be burned and not plowed in, but if it be of an open, light, friable description, the stubble should be turned under by all means. In the first case, the heat of the burning stubble will render the soil more friable, and the ashes will give that kind of manure best suited to it, while in light soils, the stubble soon decomposes, and forms an excellent nutriment for the growing crop. Before planting, the soil must be thoroughly pulverized, and to effect this, a harrow should follow the plow. To plow deep and well, the plowman must have a good plow, and one that will not choke. He must have a strong, steady team; he must walk in the furrow, hold his plow level, make no skips, plow from the middle out, turn his team to the right, move at a regular pace, make no stops, and keep always a constant watchfulness, that he is doing his work well. In plowing from the middle out, the team does not trample the plowed land in turning; the horses never get their hind feet, in turning, athwart the traces, and the team always has firm ground on which to turn. To plow, as is common, by commencing at the out edge of a field, plowing around the whole field and finishing in the middle, is objectionable, because in turning the team, four tracts to the extent taken up in making the turn, of trampled earth is made, from each corner of the field to the centre; or, if the plowman, to avoid this, rounds the corners so as to turn at each without a stop, he is, in doing this, necessarily compelled to make considerable skips, which is worse than trampling the plowed land. Land should never be plowed when it is so wet as to adhere to a bright mould board, or when it will not crumble. I do not approve of fall plowing of stubble land. From some cause unknown to me, fall-plowed stubble land is not as genial in the spring as it would be without such plowing, and besides, it is sure to be infested to such an extent with the white grub, as to render the crop very uncertain. If suitable seasons occur in the winter for plowing such lands, it will do well to plow them then, and it is better to do so, as a longer time is given for the decomposition of the stubble—but when the season of planting arrives, it must be plowed again, or listed by throwing two furrows into another.

8. The cast iron plow is to be preferred to all others, and for one reason alone. It is the most economical plow that can be obtained. I have in use, and am pleased with Hay's cast iron Rounder. When made bright, it works well and is altogether a superb plow. I want no better plow in stubble than it is, though it is not as good a plow as the Rounder, made by Rounder, of New Castle, altogether of wrought iron. I have one of his make: it is the best plow I ever saw in a stubble field.—Sloop's improved Peacock plow does excellent work in either sod or stubble. Cromwell's plow works well in both. The Carey is an inferior plow, and its use should be abandoned.

9. As to the time of planting, as a general principle, early planting is best. Most commonly, from the 1st to the 15th of April, is the most suitable period; but in this, it is to be considered that enough of warmth must be in the earth to cause the grain to germinate, on the one hand, and on the other, that if possible, the crop must be so far advanced as not to be injured by the drought of summer. In planting, I use a machine, and I cannot operate with it unless the ground is deeply plowed and thoroughly pulverized. It opens the furrow, drops and covers the seed, and rolls the ground by the same operation. With one horse, a man can, with this machine, plant eight acres in a day. It drops from four to seven grains in a place, and these places may be made at any distance apart, from two to four feet. In strong land, I plant four feet one way, and two and one half the other, leaving three stalks in a place. In weaker soils, I plant, of course, wider each way, and leave fewer stalks to a hill. The distance of the hills apart, and the number of stalks in a hill, should be regulated by the capacity of the soil. Lands, however, which will not grow two stalks in a hill four feet by three, ought to be put down to grass as unfit for corn. I never replant. Corn, planted by this machine, is not apt to be washed up by a heavy rain: it starts at its first growth from a surface level with the field surface, and at the first plowing can be approached nearer than when planted in the usual way. It can, however, be cultivated in one direction only. When this machine is not used in planting, the field must be checkered at the proper distances, and this should be regulated by the capacity of the soil. In laying off the rows the first way, let it be done with a two horse plow, and the furrow be made very deep; let it be crossed with a light single horse plow, that will make a furrow only half as deep. This will give a good bed of light earth at the intersection of the rows. The person who drops must be the most careful laborer in the field, and he must drop in the line of the rows which were laid off the first way. The seed may be covered with hoe, harrow or plow. The Bull-tongue or the single horse Dudley plow, will either of them do this work better and more rapidly than it can be done with the hoe.

10. In cultivation, I use these implements—the harrow, hand rake, hoe, plow and cultivator. They are all essential. When planted with the machine, as it can be cultivated in one direction only, the whole operation has to be done skilfully and at the proper season. If done right, the labor is comparatively small, and to accomplish this, it must be taken in time, managed with care, particularly in the commencement of the work. A deep furrow is to be run first between each row. This I do at the time I plant; and these furrows form a guide for the machine, and thus straight rows are obtained, which otherwise could not be by the machine. When the plants show themselves an inch or two above the surface, the two horse harrow is to be passed over each row, and this to be followed by a careful hand with a light rake, made with four iron teeth on one side and a small scraper on the other. He must uncover and raise up the prostrate plants, draw the clods from the hills, and throw, when it is necessary, a little loose earth among the plants. The next operation, which is to be done with the single horse plow and the hoe, is the most important of the whole series. I use the shovel plow. The plowman must exercise great caution; he must approach as near the plant as possible; he must keep constantly moving, but slowly and carefully, and must stop when his plow covers a hill and uncover it. He must plow deep. He must be followed by the hoe. The hoeman must thin the corn to the proper number of stalks, remove all obstacles, cut away weeds, cover all grass, and throw, when required, loose earth around the plants. If the labor is done well to this point and in good time, the after cultivation is easy. The grand object to be obtained, is to get a good stand, a loose bed of earth for the corn roots to occupy, and to have the hills free from weeds and grass. This being done, the cultivator is next introduced, by which the ground is levelled and weeds destroyed. Then if the roots of the corn have not extended too far, which will not be probable, the shovel plow is to be used, and as much earth is to be thrown with it upon the corn, as will cover all intermediate spaces. After this, the whole work is to be done with the cultivator, and two or three successive workings with it will be sufficient. I use the cultivator in after cultivation because it breaks no roots, and leaves the surface level, or as near so as is necessary. The roots of corn must not be broken, nor should any labor be done to the crop after the stalks begin to joint. I have seen fields of corn injured by firing, but I am, from close observation, satisfied that this never happens, unless the roots of the corn are injured in one or two ways, either by being broken up with the plow, and thus exposed to the scorching heat of the sun, or by being bound tight in a hard baked soil from the want of work at the proper time. This series may, however, be interrupted by what frequently happens, a season of rainy weather. If so, a sound discretion is to be exercised, but nothing is to be done, when the soil sticks to the hoe or plough in the mud—it is better to wait and make war upon the weeds afterwards, when the soil is light and friable. In this entire process, some things are of the utmost importance, and these I repeat, that they may be noted. The plants must get a good stand: from the start they must be kept free from weeds; the roots must have a loose bed of earth to occupy, and no form of cultivation is to be followed which interrupts the roots in their growth by breaking them, and by exposing them broken to the heat of the sun.

(To be continued.)

From the New England Farmer.

THE ADVANTAGE OF SCIENCE TO AGRICULTURE.

Mr. Breck:—I recollect seeing in a recent number of your well-conducted journal, an article commenting on an extract from one of the agricultural papers, in which the writer treated in a spirit of ridicule the idea of any advantage accruing to agriculture through the agency of "ammonia, alkali," &c.

It is strange, passing strange, to me, that men of apparent intelligence should be disposed rather to tickle the prejudice and bigotry of the illiterate, than to commend and encourage the enlightened efforts of those whose researches have resulted in devolving such important improvements—or truths which are the elements of improvements—as those which have been brought to bear so successfully upon agriculture within the space of the last quarter of a century. I say it is strange that such should be the fact, yet it is not uncommon. There are those among us—writers for the public press, too—who, as soon as a principle or deduction of science is recommended to the farmer for test, to see if it may not be of benefit to him in some particular case, are ready to prejudice him against it by the cry of "moonshine" or "humbug."

I frankly confess I have no charity for such persons. If they are *sincere* in their detraction, it is their *ignorance* which prompts it—and arrogant ignorance *deserves* no charity:—if they are *not* sincere, and *think* different from what they *say*, then they are *hypocrites*, and of the worst kind, too, for they serve as false lights that may lead others astray. If, however, in most cases, these persons had *ability* and *honesty* in the proportion that they have *arrogance* and *bigotry*, they might commend what they now denounce;—but, happily for the cause of agricultural improvement, the influence of such individuals can constitute no very serious impediment to its progress—for, what is *truth*, will *prove* itself so, and must ultimately triumph.

I have been led to these remarks, Mr. Editor, by a fact recorded in your last paper, which seems to me forcibly to illustrate the advantage which may yet be derived from the application of science to agriculture. I allude to the statement in the article headed "Skilful Agriculture and Horticulture," that Mr. Pell, of Ulster county, N. Y., had, by the application of charcoal to his land, raised upwards of *seventy-eight bushels of wheat to the acre*—a crop, I believe, unprecedented in this country. It is stated upon good authority, that the wheat-growers of France have succeeded in doubling the product of wheat in that kingdom within the last ten years, chiefly through the agency of charcoal.

Now, who discovered the value of this important agent in effecting such results? Was it the conception of any of that class just alluded to, who distrust science because its application to agriculture is *new*, or who ridicule it out of pure ignorance and bigotry, or to cater for the gratification of deep-rooted prejudice and sapient self-conceit? Was it the discovery of any of the family of *Know-enoughs*—the frothy declaimers against "book-farming," who are satisfied with knowing as much as their fathers knew, and *glory in knowing no more?* No—no. Agriculture is indebted to *Science* for this important discovery. It was the suggestion of French chemists that led the wheat-growers of France to adopt the use of charcoal on their fields—and the acquaintance with this fact and the theory, no doubt, that led Mr. Pell, also, to use it for the same purpose, and with such signal success.

To whom are we indebted for the great advantage which has accrued to our farmers from the knowledge of a remedy for sour soils, and of the valuable properties of lime as an amendment to various grounds? Do we owe these discoveries to any of those boastful "practical men," who sneer at science and the learning of books? No:—this, too, is to be charged to the credit of *science*.

Such facts as these—*these alone*, indeed—are sufficient to confound with shame the shallow detractors of *science* as an aid to the farmer—and until *they* can originate discoveries by their boasted "practical experience," as important as these, they will better act the part of wisdom in holding their speech, than in betraying their stupidity in senseless slurs at that which is above their comprehension or too exalted to suit their grovelling inclinations.

Very truly, yours, D.

Experiments in raising Potatoes.—Farmers who are fond of experiments, can try the following, in the matter of raising potatoes, without much trouble or expense: Mr. Elisha Williams, of Argyle, Penobscot county, Maine, took a small quantity of potatoes last spring, and divided each potatoe into four equal parts, planting the butt ends, the seed end, and the two centre pieces separate, and the produce was, from the butt ends, 40 lbs.; from the seed ends, 60 lbs.; and from the centre pieces both together 160 lbs.—showing the superiority of the centre pieces by 58 pounds, in the quantity planted.

Oneida Whig.

To Select a Good Husband.—Let the man of your choice be one who is punctual in his promises, and is industrious, sober and frugal. He should not smoke cigars, read "fashionable" books, or visit balls and theatres. Let him be dignified and have common sense, and all is well.

Tenn. Agriculturist.

From the Southern Planter.

CORN.

Sir—In the November number of your work, you state that you have been informed that I had raised one hundred bushels of corn from an acre of land, and you desire me to furnish you with the mode of cultivation, &c., and I proceed to answer your inquiries; but being very much occupied, and at the same time very unwell, you must excuse me if the details are not as full and interesting as you would expect.

I have been a cultivator of the corn crop for fifteen years, and during that time have never failed, I believe, to make such crops as attracted much attention; yet, I have always thought, that on our rich lands are made too much stalk and too little corn, and have annually complained of my overseers for not planting my corn thick enough.

This year, I determined to make an experiment of my own, uninfluenced by the advice of overseer or friends, several of whom remonstrated against the extravagance of my proposition. For this purpose I selected a lot, which I considered very good land, though not of the first order, as it had no previous preparation for the purpose, having been indifferently used for many years, as a horse lot, watermelon patch, cabbage patch, turnep patch, and sometimes cultivated in corn: about one-third of it, it is true, was used a part of the preceding fall for a short time as a cowpen—which, by the bye, I have always had reason to believe, was perhaps the best possible mode of improving land that can be adopted, to the extent that it can be carried: upon the balance of the lot, I had my stacks of top fodder. In the month of May, I had this land ploughed as deep as a large two-horse plough could turn it, and after having it harrowed perfectly level and fine, I had rows opened with a coulter two feet apart, and on the 18th of May, the corn was planted at the distance of nine inches in these rows of two feet. A simple arithmetical calculation will show that this would give you 105 rows and 280 stalks in a row, which would make 29,400 stalks to the acre; and if each stalk would bring one good ear, estimating five hundred ears to the barrel, which, with large corn, is an ample allowance, the product would be fifty-nine barrels and three bushels to the acre. Well, that I had no expectation of making, to be sure; yet, I thought, that by making every allowance for those stalks that would make no corn, there must still be a much larger yield, (if it made anything,) than we had been accustomed to.

It has been my habit for many years, never to plant corn without first soaking it well, and then rolling it in plaster and ashes, a practice that I recommend with great confidence to your readers, as it not only gives the corn an early start, but preserves its color even in the dryest seasons. In this case, however, the corn was soaked and then rolled as usual, and then left until the land was ready to receive it, which, being a few days later than I had contemplated, occasioned it all to sprout; when it was brought out to be planted, I found the sprouts generally from one half to an inch in length. I was at first doubtful whether I should plant it or not; at length, I concluded, as the whole affair was but an experiment, I would let that go along with it as another experiment, that might lead to some practical result, intending to examine it on the second or third day, and if I found it dead to replant it. It was planted on Friday evening; on the following Monday I examined it, and was surprised to find the corn ready to shoot out of the earth, and in many instances it had protruded; on the next day, (Tuesday,) it might be seen from one end of the row to the other.

When the corn was about eighteen inches high, I made a parcel of children about the house, under my own superintendence, drop about a tea-spoonful of plaster in the bud of each stalk, through about half the field; but I was never able to see any advantage resulted from it, which might perhaps be owing to the fact, that in rolling and laying in the plaster, the grain itself had absorbed as much as was necessary for the roots; for many have derived great advantage from this mode of administering the plaster, when it has not been rolled. When the corn reached the height of about two feet, I ran the coulter very deep and close to the corn on each side. I then ran what we call a skimmer between the rows, and had the earth thus loosened, pulled with the hoes about the stalks as well as I could, in order to give some support to the corn, in the form of a hill. From this time the corn was never worked or touched; it grew off so rapidly as in a short time to shade the whole surface of the field, so as to preserve the moisture, and at the same time to check the growth of grass and weeds; and at the time of gathering, it was the only part of my corn land not covered with crab grass; but on that there was not a spire.

The fodder was pulled at the usual time, which was an enormous yield, though I did not have it weighed: the tops were also cut as usual, and then I invited several gentlemen to come and see the corn gathered and measured. Four of them came, to wit: Mr. Peter W. Grubbs, Mr. Fendall Griffin, Dr. Miles George, and Mr. Samuel Perrin. Two of these gentlemen first measured the land accurately, which was less than an acre: the corn was then gathered, shucked, and measured in their presence, which yielded, as you have heard, one hundred bushels to the acre. I have never obtained a certificate of the facts from these gentlemen, as it was not my purpose to make any parade in the papers about it, (though I confess I think it the duty of every farmer to give to his brother farmers the results of such experiments, whether successful or otherwise,) and as you will probably have an opportunity of seeing them, or most of them, before I shall, I wish you would obtain it, and publish it in connection with this communication.

It should be remembered that the season was what would generally be called a good one. There was an abundance of rain, but it did not fall in such proportions, or at such times, as I thought best calculated to advance the crop; there were only two days, however, throughout the season, (and that at a critical stage,) that it showed signs of suffering from drought, but of course it *did* suffer for some days before it began to give way.

Thus far, I have dealt in facts; but if you will bear with me a little while, as I have pen in hand, I will now indulge a little in speculation. The result of this experiment has served to satisfy me, that it is practicable to make one hundred and fifty bushels to the acre on our best corn lands, properly prepared, and with a good season—though with a very dry season, it might bring very little. In the first place, I am convinced that this lot would have yielded me much more than it did, if it had been planted with any other kind of corn than that which was planted. Some two or three years ago, I was persuaded by my neighbor, Burton, who was a good practical farmer, to try what is generally known in that neighborhood as "Gooch's corn," which he represented as remarkable for producing regularly two ears to the stalk on common land—which my experience has taught me is a quality peculiar to that description of corn, and will, for that reason, answer a good purpose on very poor land; but it is the most indifferent corn in use for good land—for on the *best land*, I have never been able to get more than the same two short ears, measuring about eight inches in length—and for this it must have proper room, while, with the large eared gourd-seed corn on land of the same quality, the yield has been more than double. By some mistake or negligence on the part of my overseer, who prepared the corn for planting, this was the corn selected, although I had determined never to plant another grain of it on any quality of land that I had. This was the only piece of corn I had of that description.

Again, the ears made were small, generally of the size of the Baden corn, which, when I tried it, usually took 900 ears to make a barrel—and, estimating 900 of these ears to the barrel, it would show that there were 18,000 stalks that produced, on an average, though some of the stalks had two ears; and, by the calculation before made, there were 11,400 stalks that did not produce, which no doubt diminished, in a great degree, the product of the balance, as they served not only to draw heavily on the soil, but to crowd and prevent the free circulation of air. Now, if these 11,400 stalks are taken out, and the remaining 18,000 are properly distributed, they would produce much larger if not a greater number of ears—so that, by planting in rows three feet apart, at the distance of ten inches, it would give you 17,640 hills or stalks of corn, at which distance it must be obvious from the experiment already made, that every stalk would bear, (for in that case, the same number did bear, when crowded up with 11,400 that did not bear,) a full ear: then estimating 600 ears to the barrel, which would be ample, and you would have 29 barrels and two-thirds of a barrel; which, with the extra ears, (for many of the stalks would produce two,) would overrun the thirty barrels.

At all events, this is the experiment I mean to make next year; and from it, with a good season, I anticipate 150 bushels of corn—and I wish this communication may have the effect of inducing others to try it, if it is only upon a quarter of an acre. I have already laid off my lot, and am preparing it for the trial.

Yours, &c., John M. Botts.

Washington, Dec. 27, 1843.

We have not been able to comply with Mr. Botts' request, by obtaining the certificate he alludes to, because we have seen only *two* of the gentlemen; but they corroborate his statement to the fullest extent—that is as good as if a thousand had certified to it.—Ed.

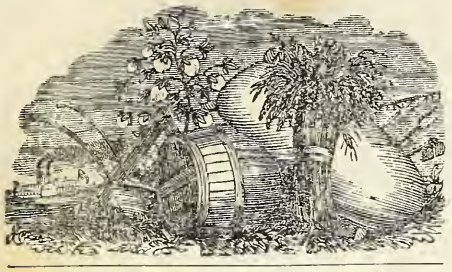
From the *Albany Cultivator.*

NECESSITY OF MANURING.

It is obvious that the manuring of a farm should only be limited by the ability of the owner. On a plentiful supply of manures, is depending the fertility of his soils, the amount of his crops, and consequently the extent to which his labor is rewarded. There is no expenditure on a farm, so safe as that for manure; and the labor required to increase it, is never labor lost; at least, if directed by an ordinary share of agricultural knowledge and skill. Every source of supply should be made available; nothing capable of fertilizing should be lost. The farmer who takes from his soil more than he returns to it, is surely impoverishing it; and if he escapes such a calamity himself, he leaves to his successors a worn-out farm. If he returns as much as he receives, his farm will retain its original fertility only; but the true farmer will scarcely be content with this. To *increase* its fertility, and the amount and quality of the crop taken from the soil, should be the aim of the husbandman. This done, his labor is lessened, his profits are greater, his farm is worth more; nor must the *pleasure* arising from beautiful fields, golden harvests, fine animals, accumulating prosperity, be omitted in making up our estimate of the advantages of successful culture.

Manure may be a homely subject, but on its preparation and use every thing is depending. Without it, the deep green of our pastures, the golden yellow of our corn-fields, and the fine beef and white loaf of our tables, could not exist. To the farmer, manure must be the first thing, and it must be the last thing: with it, he can do every thing—without it, nothing.

Farmers, make your own Candles.—Take 2 lbs. of alum, for every 10 lbs. of tallow, dissolve it in water before the tallow is put in, and then melt the tallow in the alum water with frequent stirring, and it will clarify and harden the tallow so as to make a most beautiful article for either winter or summer use, almost as good as sperm.



WEDNESDAY, MARCH 6, 1844.

THE BACK VOLUME.

All new subscribers who may desire it, can obtain the first volume, neatly bound in boards, at one dollar the volume.

Culture of Corn.—As this is the season for planting this most valuable crop, in the absence of original communications on the subject, we have transferred to our columns the first part of the Prize Essay of Mr. Williams, read before an Agricultural Society in Kentucky, and shall conclude it in our next,—to which we invite the reader's attention. Although this Essay is particularly adapted to the culture and climate of Kentucky, yet it will be found to contain much valuable information to planters in every section, where corn is cultivated.

The first and most important consideration to every planter, in the culture of any thing and every thing, is the proper application of manure —a subject in which the investigations of science are every day making new and important discoveries. It therefore behooves every planter, who desires to pursue a profitable system of Agriculture, to investigate thoroughly this important branch of his pursuit—make himself familiar with the properties and relative values of the different manures, and the manner of their application to his soils and crops; and then it behooves him to adopt that system of culture which the experience of enlightened men has established, as best adapted to each particular soil, climate and production.

It will not do for men, in this age of enlightened, scientific agriculture, to assert, that because they have devoted their whole lives to the practical operations of farming, they cannot, in middle age, or even at a more advanced period of life, be taught something new. Such an opinion, if entertained by any, and we know it is held by some, is very absurd. As well might that man, who could not read or write, but who had nevertheless kept his mind constantly employed in the contemplation of some particular branch of science, say that he could not be taught by one whose acquirements had enabled him, through a long course of investigation and scientific research, to comprehend it fully in all its details.

It is but recently, in this country, that the aid of science has been sought in the pursuit of agriculture. Why, then, may it not accomplish, in this important branch of industry, triumphs equally great, as all admit it has performed, in mechanics? Has it not a wider field for the display of its extraordinary powers in the accomplishment of good? Most assuredly. Why, then, we ask, shall the Agriculturist reject the benefits of its teachings in this particular branch of industry, while he so readily acquiesces in its utility in every other department?

But, we have been led into a train of thought which we did not contemplate. Our object was simply to direct the reader's attention to the Essay of Mr. Williams.

Corn Stalk Sugar.—A friend in Walton county, has afforded us the following information in reference to the relative value of early and late Corn, for the purposes of making Sugar, which may be advantageous to those who are disposed to make the experiment of making Sugar from Corn-stalks. Although this subject has attracted much attention throughout the country, for the last two years, it is not yet sufficiently tested to establish the practicability of making it a profitable business. It is, however, yet in its infancy; and as the experiments already made have gone far to convince many of its utility, it is impossible to form any idea of the improvements which time and experience, aided by science, may accomplish in this branch of industry. We hope, therefore, that our planters will continue to make experiments until they have fully satisfied themselves of its utility.

I have known, for many years past, that the stalks of *late planted* corn contain at least twice as much saccharine as those of early planting—and have wondered that persons raising corn for the purpose of making sugar, had not observed the fact. Corn, to make sugar, should not be planted in the lower part of Georgia, before about the first of July or as late as it will bear planting, in order to come to maturity before the frost will injure it. Corn, in the upper parts of the State, and further North, might be planted in June. In the early settling of some of the middle counties of Georgia, we often had to plant our ground in corn, after cutting off the wheat on account of the scarcity of open land: I then discovered that the stalks of this late planted corn contained almost as much saccharine as the sugar cane—and I have frequently observed the same fact since with late planted corn. Let those who intend experimenting on cornstalk sugar, try the plan of late planting, and they will see a surprising difference in the sweetness of the stalks.

CORN COBS.

We extract the following from a communication in the Central N. Y. Farmer, by C. N. Bement, Esq.;

"We will take the present opportunity of directing the attention of our readers to the great value of meal obtained by grinding corn and cob together for stock: and from the many evidences of practical farmers, as well as from experiments of our own, we cannot but press it upon the attention of the prudent farmer. Many will object to this on account of the low price at which corn and oats are selling. But we see no reason why a farmer should throw away or squander his feed, because it sells at a low price. We conceive that one of the very best reasons why he should economise in every possible manner, so that he can have more to sell, and the extra quantity make up the deficiency in price.

That there is a nutritious substance in the cob, no one, we think, that has paid any attention to the subject, will pretend to deny. In throwing away the cobs of our corn, we have been wasting very good feed. On distillation of four gallons of cob meal, four gallons of spirits have been obtained, and other nutritive matter besides saccharine, such as mucilage and oils, has been found in it. 'But besides the actual economy,' says a writer in the American Farmer, 'there is another advantage in this way of feeding corn, which ought to engage the attention of every farmer. It is notoriously true, that the unground grain of corn is heating to the stomach of all animals, and of difficult digestion, producing cholic and other inflammatory disorders, particularly in horses. They are deprived of the benefits derived from the stimulus of distension. (so necessary to the health of all animals,) by being unable to eat a sufficient bulk to produce it, before they become gorged.'

For hogs, corn and cob meal is much improved by scalding, and by boiling with vegetables of any kind, and still more by a partial fermentation.

The manner of feeding stock on raw or unground corn, is too common. It is undoubtedly one of the best of grains to finish off a lot of stock; but it lacks bulk, and is too stimulating without some coarser or more bulky substance to mix with it. Corn alone gives too much fat inside, without a corresponding bulk of flesh outside. It has been found that corn and oats, equally mixed and ground together, will improve and fatten hogs faster than the same amount of corn alone.

HINTS TO FARMERS.

Great profits in agriculture can result only from great improvements of the soil.

Great improvements of the soil can result only from unremitting industry.

The chief study of every farmer *should be what is useful, and what is useless expense, in relation to his art.* The discrimination between these is the master key of the farmer's prosperity. The first should be incurred with a freedom little short of profusion. The last should be shunned, as the sailor shuns the rocks, where are seen the wreck of the hopes of preceeding mariners.

Liberality in providing utensils, is the saving of both time and labor. The more perfect his instruments, the more profitable are they.

So also is it with his working cattle and his stock. The most perfect in their kinds are ever the most profitable.

Liberality, in good barns and warm shelters, is the source of health, strength, and comfort to animals; causes them to thrive on less food, and secures from damage all sorts of crops.

Liberality also, in the provision of food for domestic animals, is the source of flesh, muscle and manure.

Liberality to the earth, in seed, culture and compost, is the source of its bounty.

Thus it is in agriculture, as in every part of creation; a wise and Paternal Providence has inseparably connected our duty with our happiness.

In cultivating the earth, the condition of man's success is his industry upon it.

In raising domestic animals, the condition of his success is, kindness and benevolence to them.

In making the productiveness of the earth depend upon the diligence and wisdom of the cultivator, the Universal Father has inseparably connected the fertility of his creation with the strongest intellectual inducements and the highest moral motives.

In putting the brutal world under his dominion, he has placed the happiness of which their nature is susceptible, under the strong guarantee of man's interest.

Instead, therefore, of repining at his lot, let the cultivator of the ground consider his as among the highest and happiest of all human destinies, since in relation to the earth he is the instrument of Heaven's bounty; and in relation to the inferior orders of creation, the almoner of Providence.

A beautiful Oriental proverb runs thus:—"With time and patience, the mulberry leaf becomes satin."

MANURES.

While attention is demanded to every branch of the farming interest—there is one that should always receive special attention. The manure heaps should be attended to at all times; and neglect in this particular, will certainly result in a great diminution of the products of the farm. There are many of our farmers, who give little or no attention to the matter, although every agricultural journal in the country is urging the subject upon them. As well might a man expect to secure a full and perfect development of the human system, without proper food and nourishment, as for a farmer to expect a bountiful harvest, without providing the proper food and aliment for his crops.

It is not uncommon when accounts are published of extraordinary yields of grain, that expressions are heard, "these are fancy crops," "on paper," &c. Why is this? Simply because the farmer, who has been content to exhaust his soil, until his crops are of the most meagre description, has never witnessed any such yield as is spoken of—and he concludes that he has done about as well as any one could upon his farm. It matters not that the statements are verified by disinterested persons—crops actually measured, as taken from the land—his incredulity remains. If you can persuade the individual, however, to commence himself a judicious system of manuring, it will not be long before he begins to inquire as to the difference in the appearance of his crops. As successive seasons roll round, he finds that the *farmer's mine*, after all, consists in a well prepared manure heap, skilfully applied to his land.

It is not our design, at present, to enter into an examination of the different kinds of manure, or which of them is best adapted to the various purposes of the farmer. It may doubtless be shown, that the foundation upon which the farmer is mainly to rely, is the manure heap of his own yard. This can be increased with a little care and attention, to a very great extent. The value, also, of green crops as a manure, is not generally appreciated. Where there is a deficiency of the common barn-yard manures, the most economical substitute is that derived from urning in green crops. This practice now prevails to a very considerable extent in the wheat growing districts, at the west, and has produced a very great change within the last few years—more abundant crops are now realized, and the land is preserved in good tilth.

It is of the utmost importance to the farmer, to keep his land improving. Industry and attention alone will secure this. If he neglects manuring, for a single season, his lands show the neglect, and a longer time is required to bring his farm into good condition. We would urge upon the farmer, to be awake at all times to the preparation of manure. Let nothing be lost or wasted. Let the barn-yards and stables be prepared, so as to secure, in the most perfect manner, all the litter and droppings, and urine from the cattle—and as occasion may require, let swamp earth and lime be mixed with the barn-yard manure.

Not long since, in visiting one of our dairymen, in a northern town, who stables about fifty cows, we were very much gratified to find so much attention given to the securing, and preparing for his farm, the manure from his stable. Nothing seemed to be wasted. The construction of his stables for his cattle was such as to secure the whole. From the product of his farm, the last year, it is very evident that attention has heretofore been given to the subject, in some measure proportioned to its importance.

It is our intention to resume this subject hereafter, and to examine the various qualities, and advantages of the different kinds of manures, that are used in this country.

Central New York Farmer.

From the Southern Miscellany.

THE SWEET POTATO,

MR. HANLEITER—In one of the numbers of the "Miscellany," published about a year ago, I saw an article, (copid from the "Southern Cultivator,) on the culture of Sweet Potatoes, from the pen of Mr. McKinly, of Oglethorpe county, which seemed to me to point out the best mode of raising that article, and I resolved to test the plan by experiment. Accordingly, early in the season, I prepared my ground by deep and thorough ploughing, and continued at every suitable opportunity to plough it until the season should suit for transplanting my slips. This did not occur until about the tenth of June—at which time I set them out. The mode which I adopted was as follows: I first laid off my ground by running furrows with a long wide shovel four feet apart—then followed each furrow with a long scooter, and that by a long coulter. This done, a furrow on either side of the one laid off was run in the same way—first the shovel, then the scooter, then the coulter. The bed so prepared, I smoothed off with a hoe, leaving it flat on top, and but slightly elevated above the surrounding surface. In the centre of this, fifteen inches apart, I planted my slips. They grew off remarkably well, scarcely one dying.

The cultivation was such as I gave my corn—only there was but two ploughings and two hoeings—and I was careful that not a vine should be covered up, or broken off.

The soil in which they were planted was light and sandy—not rich—and the yield, one hundred and seventy bushels from 66-100 of an acre. The potatoes were Yams, of the ordinary kind—and such as I had cultivated in the old way for several years, and were, on the average, doubly as large as any I had ever raised before. The yield from the same quality of land was nearly double.

They were dug soon after the first frosts, when the vines were partially killed and the ground dry, when I found the soil in which they grew, as light and mellow as the day they were planted. I put them up in a house, prepared for the purpose, under my dwelling, covering them entirely with dry sand—and none have rotted except those which were injured in digging, and those only before they were housed. I am so much pleased with my success last year, that I shall try the same plan again this—being careful, as I was then, to select the largest potatoes for seed, believing that potatoes, as well as every other plant, must degenerate so long as the smallest and most inferior seed is used in planting. I send you a specimen of what my potatoes are now, of the excellence of which you can judge by tasting.

Yours, truly, E. L. WITTICH.

Madison, Feb. 29th, 1844.

AUGUSTA MARKET.

TUESDAY P. M., March 5.

Cotton.—We have no new feature to notice in our market, which seems to be gradually declining. Few persons seem willing to operate, and the few sales made are forced upon the market. There has been so little done, that we omit quotations.

TO HOG RAISERS.

THE subscriber offers for sale the JERUSALEM ARTICHOKE, which, by early application, can be obtained at his Store in Monroe, Walton county. The value of this article as food for Hogs, is no longer a matter of experiment or doubt. It has been fairly tested in Kentucky and Tennessee, and the Northwestern part of Georgia. They are required to be planted in the spring, and will be fit to feed in the ensuing fall and winter. I hazard nothing when I say not one-tenth of the corn now fed to hogs, is at all necessary; and, by the use of the artichoke, the use of corn, for hogs, may be entirely dispensed with through the whole winter. The first year, they are no more trouble than sweet potatoes: after that, they require no cultivation.

J. A. CLARK.

Monroe, Walton Co., Ga., Feb. 21. 2t

CONTENTS OF THIS NUMBER.

	PAGE.
Address, extracts from Mr. Hudson's	33
Corn, Premium Essay on the cultivation of	36
Corn	38
Corn, culture of	39
Corn Stalk Sugar	39
Corn Cobs	39
Hints to Farmers	39
Manuring, necessity of	38
Manures, Dana's Prize Essay on	34
Potatoes, experiments in raising	37
Science, the advantage of to agriculture	37

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SOUTHERN CULTIVATOR.

VOL. II. AUGUSTA, GA., MARCH 20, 1844. No. 6.

From the New England Farmer.

DANA'S PRIZE ESSAY ON MANURES.

SECTION SECOND.

Shovelling over the Compost Heap.

The above remarks, (section 1st,) may be called our compost heap. It must be well shovelled over. You must, reader, before you cart it out and spread it, understand well what this compost contains. Now, just let me turn over a few shovels full, and fork out the main points to which I wish to call your attention.

1st. That all plants find in stable manure every thing they want.

2d. That stable manure consists of water, coal and salts.

3d. That these, water, coal and salts, consist in all plants of certain substances, in number fourteen, which are called—1. Oxygen; 2. Hydrogen; 3. Nitrogen; 4. Carbon; 5. Sulphur; 6. Phosphorus; 7. Potash; 8. Soda; 9. Lime; 10. Magnesia; 11. Alumina or clay; 12. Iron; 13. Manganese; 14. Chlorine; which last, as we have said, forms about one-half the weight of common salt. And if you always associate with the word chlorine, the fertilizing properties of common salt, you will, perhaps, have as good an idea of this substance as a farmer need have, to understand the action of chlorine.

4th. These fourteen substances may be divided into four classes: 1st, the airy or gases, oxygen, hydrogen, nitrogen and chlorine. 2d, the combustibles, carbon, sulphur and phosphorus. 3d, the earths and metals, lime, clay, magnesia, iron and manganese. 4th, the alkalies, potash and soda.

You may be surprised that I have not turned up ammonia, but this exists in plants as hydrogen and nitrogen.

5th. The term salt includes a vast variety of substances, formed of alkalies, earths and metals, combined with acids. Fix well the meaning of this term in your mind, and remember the distinction pointed out, that some salts are volatile, and act quick in manure, and others are fixed and act slower.

6th When plants die or decay, they return to the earth or air these fourteen substances.—Those returned to the earth from mould, which thus is composed of carbon, salts and water, is natural manure.

7th. Mould consists of two kinds, one of which may be, and the other cannot be, dissolved by water. Alkalies put it into a state to be dissolved, and in proportion as it is dissolved it becomes valuable as a manure.

8th. If then manure contains only water, carbon and salts, any substance which affords similar products, may be substituted for it. Hence, we come to a division of manures into natural and artificial. The consideration of these is the carting out and spreading of our compost. And we shall first consider in detail the natural manures. That is, those which are furnished us by the dung and urine of animals, and the manure or mould formed by the decay of animal bodies or plants. These are truly the natural manures, consisting of water, mould and salts. This is all that is found in cattle dung. This being premised, we may divide manures, reader, for your more convenient consideration, not by their origin, but by their composition. We may divide manures into these three classes: First, those consisting of vegetable or animal matter, called mould: Secondly, those consisting chiefly of salts: and, thirdly, those consisting of a mixture of these two classes. And, beginning with the last first, we will now proceed to their consideration.

SECTION THIRD.

Carting out and Spreading.

The general chemical information set forth in the preceding section, will be of no service to you, reader, if it conducts you not beyond the result arrived at in the close of the last section, that cattle dung is composed of water, mould and salts.

You want to know what salts, and how they act. If you understand this, you may be able to say beforehand, whether other things, supposing their nature understood, can take the place of the mould and salts.

The mould, then, of cattle dung, as all other mould, contains the following substances:

The water consists of oxygen and hydrogen.

The mould consists of carbon, oxygen, hydrogen, nitrogen and ammonia.

Thus it is seen that the mould contains all the substances found in the first class into which the elements of plants were divided. The salts contain the sulphur, phosphorus, and the carbon, as sulphuric, phosphoric, and carbonic acids, and the chlorine as muriatic acid or spirits of salt.

The acids formed of the elements of the fourth class of the substances entering into plants, are combined with those of the second and third classes, namely: the potash, soda, lime, clay, magnesia, iron, and manganese. Here, then, we have all the elements of plants, found in cattle dung. Let us detail their several proportions. We have all that plants need, distributed in cattle dung, as follows:

In 100 lbs. of cattle dung, are,	
Water,	83.60
Mould, composed of hay,	14.10
Bile and slime,	1.275
Albumen, a substance like the white of an egg,	175
Salts, silica, or sand,	14
Potash, united to oil of vitriol, forming a salt,	05
Potash, united to acid of mould,	07
Common salt,	08
Bone dust, or phosphate of lime,	23
Plaster of Paris,	12
Chalk, or carbonate of lime,	12
Magnesia, iron, manganese, clay, united to the several acids above,	14
	100

SECTION FOURTH.

Of the Action of Mould in Cattle Dung.

Here, then, we have cattle dung, with its several ingredients, spread out before us.

We have now to study its action. We need here consider only the salts and mould. The water is only water, and has no other action than water. The mould includes the hay; for that has, by chewing, and the action of the beast's stomach, lost so much of its character, that, mingled with the slime and bile, &c., it more rapidly decays than fresh hay would, placed in similar circumstances. During this act of decay, as you have already learned, the volatile parts of the mould are given off in part. These escape as in burning wood, as water or steam, carbonic acid, and ammonia. In consequence of this slow mouldering fire or decay, the manure heats. Here, then, we have three very decided and important actions produced by the vegetable part, or mould of cattle dung. First, carbonic acid is given off; second, ammonia is formed; third, heat is produced. Let us now consider each of these, and their effects.

First, the great action of the carbonic acid is upon the soil, its earthy parts. It has the same action on these, that air, rain, frost, have; it divides and reduces them. It not only reduces them to powder, but it extracts from the earth potash and the alkalies. This is a very important act, and shows why it is necessary that decay or fermentation should take place in and under the soil among sprouting seeds and growing roots, in order that they may obtain from the soil the salts they want.

If well-rotted manure contains abundance of these salts, ready formed in its mould, then there will be less necessity of this action of carbonic acid. But here again it must be remembered, that this abundance of salts, ready formed in mould, can be produced only at the expense of great loss by fermentation of real valuable parts. For,

Secondly, the next great action of the mould of cattle dung, is to produce or form ammonia. This plays a threefold part: its first action is to render the mould more soluble; this action it possesses in common with the fixed alkalies, potash and soda. All the alkalies put a large, but undefined portion of mould, into a state fit to become food for plants. The second action of ammonia is this, it hastens decay. It is the bellows, we may say, kindling the slow mouldering fire. The third action of ammonia is to combine with any free acids, such as vinegar, or even an acid formed of mould itself, but especially with aquafortis, or nitric acid, which is always produced where animal or vegetable matters decay. This is a highly important fact. The result of this action, the production of ammonia and aquafortis during the formation of mould, is, that a kind of saltpetre is thereby produced. That is, the ammonia and aquafortis unite, and form a salt, with properties similar to saltpetre. But we want the first and second action of ammonia to occur, before the third takes place. Consider now, reader, whether a more beautiful and effectual way can be devised to hasten decay, and render mould more fit for nourishing plants, than this which nature has provided. The ammonia is volatile. It remains, not like potash and soda, where it is put, incapable of moving unless dissolved by water; but ammonia, like steam, pervades every part. It is as expansive as steam. Heated up by the slow mouldering fire of decay, it penetrates the whole mass of mould. It does its work there. What is that work? It has already been told. But, if it finds no acid to combine with, it then unites with the mould itself. It is absorbed by it. The mould holds it fast; it stores it up against the time when growing plants may need it. Now it is only where the abundance of ammonia produced satisfies these actions of hastening decay, making mould soluble, and filling its pores without combining with it, that the formation of saltpetre takes place. So where animal matters, which are the

great source of ammonia, decay, there we may expect all these actions to occur.

How important, then, is that action of mouldering which produces ammonia. If, reader, you will reflect upon the consequences of this action, you will at once see, that if the mould is in too small a quantity to retain the ammonia, it may escape. If, by a wasty exposure, you allow your mould to dissipate itself in air, as it certainly will, you not only incur the loss of that part of the mould, but you diminish, at the same time, the chance of keeping the ammonia which has been formed. No doubt all cattle dung exposed to air, forms more ammonia than it can retain. Hence the necessity and the reason of forming composts with this substance. "Keep what you have got, and catch what you can," must never be lost sight of in manure.

The third action of mould is, the production of heat. Little need be said upon this. That a slight degree of heat hastens the sprouting of seeds, you well know. That different manures produce different degrees of heat; that some are hot, some cold, you well know, and adapt your seed and manure to each other. The degree of heat depends upon the rapidity with which decay occurs. And this is affected by the quantity of ammonia which each manure can afford. The great point to which your attention should be directed, when considering the power of mouldering to produce heat, is, that it shall not go so far as to burn up your manure, just as hay will heat and take fire.

(To be continued.)

From the Western Citizen.

PREMIUM ESSAY ON THE CULTIVATION OF CORN.

BY GEORGE W. WILLIAMS.

(Concluded.)

11. The crop is to be secured by severing the stalk near the ground, and by stacking it in the field. If the grain is for bread, it should not be cut till after the first frost, or until after it has fully matured. Corn intended for stock, may be cut at an earlier period. As soon as the milk is entirely out of the grain, and it has received its enamel, or has a firm feel to the nail, the work may be begun. Sixteen hills, from a square, are to be put into each stack, and the stacks are to be made as follows: In the first place, ties are to be made to support the stacks, at least ten days before the cutting is commenced. The laborer counts eight rows from the edge of the field, passes between the eighth and ninth rows, ties the eighth and ninth hills in each of these rows, by bending the stalk diagonally across the square, and twisting the tops securely together. These ties being made previous to cutting, become staunch and afford good stays for stacks when set up. In cutting, the workman has a straight knife, which is best made from an old scythe blade. With a straight knife, he can strike in any direction, and it is necessary for him to do so, because from the many positions in which he will find the stalks standing and leaning, and sometimes lying, he will have to make many different kind of strokes which cannot be done so well with a crooked knife as with a straight one. In this work, he goes first to the tie; here he cuts around the tie and places the hills as he cuts them carefully and nearly erect within the tie. He then cuts with the right hand, gathering the corn with his left, and sustaining the stalks, when cut, upon his left arm. More than one hill may be cut, and sustained in this way, before he carries them to the stack. In carrying them to the stack, he does not put them on his shoulder, nor does he drop his knife. It is held in the right hand, and the turn of corn is carried to the stack upon the left arm. He places it carefully on the stack, equalizing each side and trimming the stalks properly to the stack. The chief difficulty in stacking is to keep the stack from going into a twist, and this can be done only by attention in placing the stalks in such a way as that they, while they recline to the head of the stack at the top, shall not lean either to the one side or the other. This mode of cutting and stacking is the most expeditious one known to me, but to work upon this plan, the laborer must be a strong man and an active one. In average crops, when the stalks stand straight, such a man can put up twenty or twenty-five stacks in a day. But this is extra work, and in such corn I consider sixteen stacks a day's work for a common hand. Another, and the most usual mode of cutting and stacking, is to approach the tie and cut around it as in the first instance, placing the stalks as cut within the tie. When this is done, the whole square is cut and laid in bunches of four hills upon the ground and across the rows. The knife is then thrown down, and the bunches carried to the stack. This each man may do in the way easiest for himself, but experience will teach all, that the easiest and most rapid is never to put the turn on the shoulder, but carry it on the arm. Too much care cannot be taken in making the stack, for if it gets into a twist, more than half the corn and fodder will be destroyed.

12. When the corn is thus secured, and after the corn has sufficiently dried, the next operation will be to crib that part of it which is for bread, and take care of the fodder. This must be done before the winter sets in, for shucking corn in winter weather is disagreeable work, and but little can be done at it. Damp weather should be selected, if possible, and the laborer will place himself at the stalk, and as he takes the ears from the shuck and stalk, he casts them in a compact heap, and places the fodder in two or three piles around the place where the stack stood. When this is done, the tie having been left standing, he places the fodder around the tie again, making a compact stack, pressing the whole together well. A band must be put around the top of the stack. In doing this, the butt ends of three or four stalks are to be inserted a foot or more into the body of the stack near the top, and the stalks bent around the stack; at the tassel end of this band, another bunch of stalks is to be inserted as before—around this, the tassel end of the first bunch is to be wrapped, and so on till the band passes altogether around and binds the stack well. The stacks tie best in the morning, when the dew or damps of the night are on the fodder. The corn is then carted to the crib. That part of the crop intended for stock is left in the field, from whence, at the proper time, it is carried to the place of feeding, and there consumed, fodder and all.

13. I have thus given the whole process in the cultivation of corn, and, as I think, the best method to secure a good average crop upon average soil. I have, however, an opinion that upon prime land, with a judicious use of manures, much larger crops may be grown. I am now engaged in making the fourth experiment to test the truth of this opinion. These experiments have not been entirely satisfactory to myself, but as I intend to continue them, I may be enabled, hereafter, to arrive at a mode of cultivation to be preferred to the one now practised. Indeed, I am sure, from what I have done, that as much as one hundred and fifty bushels per acre, one year with another, with great care in cultivation, if the land is first rate, can be attained. But the soil must be the best for corn, and entirely free from weeds. My plan has been, in these experiments, to plow deep and pulverize the soil thoroughly before planting—to plant early and close—to put one stalk in a place two feet by eighteen inches apart, except in the last experiment, when I put two stalks in a hill two feet apart. The whole after cultivation was done with the hoe, and was comparatively of a light character. The first experiment I made produced the largest yield—all the circumstances were favorable. The other three had several difficulties to encounter, most of which, except in the second, when a severe drought at the time the grains were filling, nearly cut off the whole crop, might have been to some extent obviated. The average of the four crops is one hundred and ten bushels, four gallons one and one-half pints, per acre. This falls greatly short of 150 bushels per acre, but I am confident that so large an average crop as that may be attained on choice land, with proper attention.

GEO. W. WILLIAMS.

Near Centreville, Sept. 28, 1843.

EXPLANATION OF TERMS.

(Continued from page 28.)

Acids—are substances of a sour taste.

The acids are very numerous. Their most distinguishing properties are,

1st. They change to red those colors of vegetables which the alkalies change to green.

2d. They combine with alkalies, and thereby form various kinds of salts.

Thus, the combination of muriatic acid with soda forms common salt.

Some of the acids are met with in a solid state—others in a fluid state, as vinegar—and others in a gaseous state. Of the latter is carbonic acid, which requires a more particular description.

The carbonic acid, when uncombined with any other substance, is always met with in a state of gas, and hence it is called carbonic acid gas. It is the same substance which was formerly called fixed air. It exists in a small proportion in the atmosphere. It destroys life and extinguishes the light of a candle when immersed in it. It is disengaged largely from liquors, such as beer, cider or wine, when in the act of fermentation. It is this gas which produces the many unhappy accidents in some subterraneous caverns, in closed cellars containing large quantities of fermenting liquors, in some deep wells, and in bed chambers, warmed by burning charcoal in pans.

This acid combines with a great variety of substances, which are then called carbonates. It exists in marble, chalk and limestone, in different proportions, all of which are called carbonates of lime, and the burning of limestone is for no other purpose, but to expel the carbonic acid, which is done by heat, in which operation the limestone loses nearly half its weight.

The alkalies attract it from the atmosphere. It is present in pot and pearl ashes, from which it is disengaged by the addition of a stronger acid, as every one may have seen in throwing pearlash into cider, as some people do to drink in the morning. The acid in the cider, in uniting with the pearlash, displaces the carbonic acid, which rises in the form of gas through the liquor, producing much foam with a hissing noise, called effervescence.

43. *Atmospheric air*—or the air which surrounds this earth, is a mixture of two different kinds of air, called *oxygen* and *azote*. It likewise contains a small proportion of carbonic acid gas, a substance already described.

It is well known that no animal will live, or fire burn, without air; but it is that part of the air called oxygen which is necessary for both. It is this which supports life and combustion; and where there is no oxygen, an animal will die and a light will be extinguished as suddenly as where there is no air at all.

All this may be made plain by a very easy experiment. Take a lighted candle, put it into a candle-stick, and set it into a pail of water so deep as that the light of the candle may rise three or four inches above the surface of the water. Then take a deep tumbler, or a wide-mouthed decanter, invert it, and let it down over the candle till the brim shall dip into the water. As the candle continues burning, the water will be seen rising in the decanter till it shall be about one quarter part full, when the candle will suddenly go out. Now the reason of the water's rising in the decanter, is because the oxygen is gradually consuming by the lighted candle; and the reason that the candle goes out, is, that the oxygen at that instant is all gone, or has all been expended in the combustion. What is then left in the decanter will be the other part or kind of air called azote, and if a small animal should be introduced into this air, it would die as suddenly as if it had no air at all.

Oxygen gas, (for you must remember that every substance in the form of air is called a

gas,) is a very wonderful substance. It unites with iron, when exposed to the atmosphere, for any length of time, and converts it into rust; it unites with melted pewter or lead, and converts them into dross, or oxyde, as it is called; it unites with another kind of gas, called hydrogen, and forms water. Yes, what perhaps it may surprise you to know, water is not a simple, as most people suppose, but a compound substance, composed of oxygen and hydrogen gas. Both its decomposition and its composition are common experiments in every chemical room.

Oxygen likewise is one of the ingredients in the composition of acids, all of which are compound substances; hence, oxygen has been called the great acidifying principle. Thus, it unites with sulphur, in the act of combustion, and forms sulphuric acid, or oil of vitriol, as it was formerly called; it unites also with carbon or charcoal, when burning, and forms carbonic acid gas, already described; and hence, we see how the carbonic acid gas, which sometimes proves fatal in close shut bed-chambers, heated with burning charcoal, is produced. The oxygen in the atmosphere unites with the charcoal or carbon in burning, and thus produces this gas, so deleterious to life when breathed without a due proportion of atmospheric air mixed with it.

These four elementary substances, oxygen, hydrogen, azote and carbon, possess a very wonderful agency in nature, and every one who has any wish to look beyond the mere surface of things, cannot but be gratified in knowing more about them. We shall have further occasion to speak of these substances in the Cabinet; it is important, therefore, that the character and distinguishing properties of each should be well understood. These are given in the following concise definitions, which are not to be forgotten, viz:

49. *Oxygen*—is one of the constituent principles of water; it is called vital or respirable air, and is essential both to the support of life and combustion.

This substance performs an important part in most of the changes which take place in the mineral, vegetable, and animal kingdoms.

50. *Hydrogen*—is one of the constituent principles of water; it is very inflammable, and was formerly called inflammable air. It is the lightest of all ponderable substances.

This is the substance generally used in filling air-balloons. It is readily obtained by the decomposition of water. Vegetables and animals also in a state of decay and putrefaction afford it, and it is evolved from various mines and volcanoes.

51. *Azote*—is that part of atmospheric air which is incapable of supporting life or combustion.

All combustible substances burn violently in pure oxygen gas, and if it was not diluted in the atmosphere by a large portion of azote, it would be impossible to extinguish any considerable fire when once lighted up, and something like the general conflagration of the world would immediately commence.

Azote exists abundantly in nature, forming the greater part of the atmosphere, and is one of the principal ingredients in animal substances.

52. *Carbon*—is the pure part of charcoal.

Carbon forms a large proportion of all vegetables; it exists also in animals, but its quantity is small.

53. *Carbonic Acid*—is a combination of carbon and oxygen, in the proportions of 18 parts carbon to 82 parts oxygen.

An account of this substance has already been given under the article "Acids." It may here be added, that the sources of this acid are immense. It exists in the atmosphere; it is found in abundance in many mineral waters, as at Ballston and Saratoga, in the State of New York; it is produced by the combustion of wood and charcoal, by the fermentation of liquors, and by the decomposition or putrefaction of vegetable substances; but the largest store of it is that enormous quantity solidified or rendered solid in all the immense beds of chalk and limestone with which every part of the globe abounds.

Of limestone, 45 parts in every 100 are computed to be carbonic acid.

As before observed, when uncombined with any other substance, it always exists in the state of gas. It is heavier than atmospheric air. If this gas be poured from a wide-mouthed jar upon a lighted candle it will be as effectually extinguished as by water.

54. *Effervescence*—is a sudden disengagement of gas taking place within a liquid and separating from it with a hissing noise.

55. *Chemical Affinity*—is a term used to signify the attraction or tendency there is between the particles of certain substances, of different natures, to unite, thereby forming a third substance possessing properties altogether different from those of either of the two substances of which it is composed.

Thus, potash and oil have a tendency to unite, thereby forming soap, which is a third substance very different either from the oil or the potash, of which it is composed.

Those substances which are capable of uniting in this manner, are said to have an affinity for each other as oil and potash; but oil will not unite with water, and therefore those substances which do not form a chemical union, are said to have no affinity.

56. *The Primitive Earths*—are four, viz: clay, sand, lime and magnesia.

These are the only earths which enter into the composition of soil; they enter also in very minute portions into the organization of plants.

Sand and clay are by far the most abundant; lime is required but in small proportions; every soil, however, is defective without it. Magnesia is found but in few soils; its place is well supplied by lime; its entire absence, therefore, is not considered any defect.

(To be continued.)

From the Albany Cultivator.

INDIAN CORN.

In actual value to the country, it is probable our Indian corn crop is not exceeded by any other of our agricultural products. Adapted, in some of its varieties, to every part of the United States; exceeded in nutritive powers by few, if any, of the cultivated plants; cultivated with great ease, and only requiring one season for its perfection, it is not surprising that corn should be a general favorite, and that more land should be employed in the production of this crop, than any other one. The corn crop of the United States may safely be estimated at 400,000,000 of bushels; and its value $125,000,000 annually. Immense as is the quantity of corn produced, it must be evident to all, that this quantity might be greatly increased, even were no more land devoted to its culture, by a more skilful husbandry. It is only by this course, indeed, in the older States, that any increase of quantity is to be expected, since no considerable addition of land to that already devoted to this crop, can consistently be made. In the great valley of the Mississippi, it is impossible to set limits to the quantity that might be annually grown, should the demand induce the population to divert their productive energies into that channel.

There are few crops which show the effect of skilful cultivation more strongly than that of corn; and this marked improvement should induce the farmer, instead of adding to his number of acres in corn, to adopt that course which will give him the greatest crops, leaving the surplus acres to other uses. If a man, by good culture, can obtain from ten acres of land the same crop which it now takes from fifteen to twenty to give, then prepare the land so as to obtain the greater amount. That there are thousands of acres that now do not yield more than from 30 to 40 bushels to the acre, that would, with thorough culture, yield from 70 to 80, none acquainted with our agriculture can doubt. But we have heard it said, "If I employ all my labor and manure on ten acres, the remainder of my fields must suffer." The answer is easy: why cultivate 20, when you can get the same quantity from 10? and will rest from cropping be more injurious to the soil, than the exhausting process of cropping without manuring? Why spread the labor and the manure that applied to ten acres would give 800 bushels of corn, over thirty, and in the end receive but 600 bushels? Let it be remembered, too, that a piece of land, once thoroughly fitted and manured for corn, is fitted to produce a succession of good crops, which, in all probability, would more than repay, in their extra product, any extra expense incurred for the corn.

As the season for planting corn is approaching, we have collected from various sources, notices of some remarkable corn crops, mode of culture, &c. In the selection of examples, reference has been had more to the details of treatment, than to the amount of the crop, as it is of but little use for a farmer to publish to the world that he has grown an extraordinary crop, unless he also shows how he has done it. For this reason, we have omitted some of the heaviest crops of corn on record. And here we would remark, that in awarding the premiums for crops, our agricultural societies have not sufficiently insisted on full details of culture from the applicants. In consequence of this neglect of details, one great object of such associations has been defeated, and the good effected by them proportionably limited. This, every one must feel, who turns to the reports of the societies in the different States or counties, with the view of ascertaining the best method of culture in all its parts, of any given crop.

The first instance we shall select is from the report of a crop made by Mr. Stevens, of Hoboken. We do this because it is one of the earliest of our great corn crops, and shows the action of street sweepings or manure, very plainly:

"Mr. Stevens gave his ground three plowings before planting, and before the last plowing put on 700 cart loads of street manure. He then planted in double rows 5½ feet asunder, dibbling in each grain. To do this with expedition and accuracy, he bored two rows of holes in a piece of board about four feet long, so as to form equilateral triangles, the sides of which were seven inches, as thus:

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Into these holes he drove pegs 3½ inches long. As the corn was dropped into the holes so made, a man followed with a basket of rotten dung, with which he filled them up. During the season the corn was suckered three times. The intervals were repeatedly plowed, and the rows kept clean of weeds by hoeing and hand-weeding."

This corn was raised on a bet of 50 guineas between Mr. Stevens and a Mr. Ludlow. Mr. L. planted his rows four feet apart, and the corn 8 inches from stalk to stalk in the rows. His ground was manured with 200 loads of street dirt. His crop was 98 bushels and 14 quarts per acre; Mr. Steven's 118 bushels and 2 quarts per acre. Unless the great quantity of street manure used made it necessary, or the condition of the soil was bad, no good reason can be given for so many plowings for a corn crop.

In 1831, B. Butler, Esq., of Chenango county, in this State, raised 140 bushels of corn from one acre. The soil was a stiff loam, nearly covered with small stones, of which 50 loads to the acre were taken off before tillage. It was plowed but once, but this was done in the best manner. Mr B. adds:

"We then drew on 25 cart loads, (about 25 bushels to the load,) of sheep manure, and spread it evenly on the furrow—rolled and harrowed with the furrow, with a light double harrow, containing 40 teeth, until it was a complete garden mold, and the earth well incorporated with the manure. Again picked off the stones, and again rolled and planted on the 22d and 23d of May, on an even surface, with the early small white flint corn steeped in a solution of

copperas and saltpetre, and then tarred and rolled in plaster, and planted in double drills 3½ feet from center to center of the middle drill. The plants standing singly from 12 to 13 inches on the main drill. The corn was once plowed, and afterwards kept clean with the hoe, plastered well on the plant, topped at the usual time, was ripe on the 15th of September, and was harvested on the 14th and 15th of Oct.

In this case, the sheep manure sustained the high reputation it has acquired for the corn crop, both at home and abroad, and with the exception of that produced in the hog pen, our experience would lead us to prefer the manure from the sheep fold, to any other ordinary farm manures. One thorough plowing was here found sufficient, the rest being left to the harrow; and we are convinced that in most cases one plowing well done, will be found better than more. A fine mellow seed bed must in any event be had, and the soil must be moved with either plow or harrow until this is provided.

Another example of a good crop of corn, is that of Mr. Bugbee, of Palmer, Mass., who raised from five acres of land 540 bushels, or 108 bushels per acre. The following is the account given by Mr. B. of his mode of culture:

"Last spring, I plowed up a piece of green sward, measuring about five acres, and prepared it for corn as well as my means would permit. After plowing, 30 loads of manure to the acre, were spread over the ground, and thoroughly mixed with the earth by means of the harrow, without turning up or breaking the sod. The ground being now prepared, on the 30th of May I planted my corn. A small quantity of ashes, lime, and plaster of paris, mixed together and prepared for the purpose, was used at the time of planting, or put in each hill. Of this mixture, there were 2½ bushels of lime, 2½ bushels of plaster, and 25 bushels of ashes for the 5 acres. The corn was hoed but twice, a third hoeing being unnecessary."

This crop affords another of the many proofs already existing of the excellent effect of such a compost of lime, plaster and ashes, especially on inverted sward, as that prepared by Mr. B. Those farmers who sell off their ashes, and harvest corn crops of only 30 or 40 bushels per acre, would do well to imitate Mr. B. in the use made of his.

In 1823, Leonard Hill received the premium offered by the Plymouth (Mass.) Ag. Society, for the best crop of corn. We condense his statement of the culture, &c. The soil naturally was deep and rich. During the previous winter, while it was greensward, his cattle were foddered upon it. In May, it was plowed very deep into squares 2 feet 7 inches in width. It was then manured in the hole, 64 cart loads of barn manure being used. It was planted early with white and flesh colored corn, varieties having small cobs. The kernels were placed about four inches apart in the hills, not thrown together as usual. In the middle of July, the corn spindled, grew very thick, and so filling the spaces that the rows were scarcely discernible. It was hoed three times, and all the suckers early cleared from it. It was gathered on the first of October. The quantity of shelled corn, ascertained by disinterested men, was 139 bushels, 3 pecks.

This was a great crop, but the account is defective in not stating the number of stalks left in each hill. The varieties of corn must have been of the small kind, or such close planting would have prevented the formation of ears. The quantity of manure was enormous.

Some of the most extraordinary crops of corn ever grown in the United States, were those produced by the Messrs. Pratt of Eaton, Madison county. In 1822, they obtained from 3 acres, 517½ bushels, or 172 bushels per acre, and in 1823, from 4 acres, 680 bushels, or 170 bushels per acre. They prepared their land in the best manner, then with a shovel plow made a trench 20 inches wide, into which the manure is placed and covered. On these trenches, so covered, the seed corn was drilled in three rows, thus:

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Two feet nine inches distant, or 3 feet 9 inches from centre to centre of the rows. Another trench was made, filled, covered and drilled in a similar manner. Thus the corn stood in single stalks, 6 inches apart every way, and 2 feet 9 inches clear between the rows.

It is evident that, planted in this manner, more stalks would be placed on an acre than in almost any other way, but nothing short of the most heavy manuring would carry through such a crop. We have found, by experience, that in very dry summers, close planted corn suffers far the most, and if too near, is a total failure.—We once planted a piece 2½ feet by 18 inches in the rows, intending 3 stalks to the hill. The corn was manured in the hill. The growth was very rapid and promising, until the ears were about setting, when a drouth of some weeks occurred, and the result was not more than half a crop. The years in which Messrs. Pratts' crops were grown, were of the most favorable kind, and the crops, under their course of planting and culture, most astonishing.

In 1835, Mr. Brewster, of Oneida county, communicated to Judge Buel an account of a crop of corn and potatoes, raised by him in that year. He says:

"I had a ten acre lot of stiff strong sward, that had not been plowed for many years; this I intended chiefly for Indian corn. In one corner of this, I measured off one acre for corn, and by the side of it another acre for potatoes. I drew on about twenty loads of yard manure to the acre on each, turned it over, followed the plow with the roller, harrowed and furrowed three feet apart from north to south, and put down about the same quantity of manure that was turned under. Commenced planting the 20th of May; seed soaked, rolled in tar and water and plaster, put 4 grains in a hill, one foot apart.—The first day planted one-fourth of an acre, which came up well; the other, planted on the 22d and 23d, did not come up well, owing, as I thought, to the seed lying too long in the hot sun after being soaked, and we replanted it on the 2d and 3d of June."

From the ¼ acre first planted, Mr. B. had 26 bushels 8 qts., or 105 bushels to the acre; the other ¾ did not do so well, and he only got 94 bushels and 2 quarts of shelled corn from the acre. The potatoes were planted on the 1st and 2d of June, furrows three feet apart, and the seed all whole and large, dropped one foot apart in the rows. One good dressing was given them with the plow and hoe, which was all the attention they received. At gathering, by measure, he had 519⅓ bushels, by weight, 560.

Several years since that excellent farmer, Mr. Reybold, of Delaware, on a field of 22 acres, raised 2216 bushels of corn, or 100¾ bushels per acre. Seven years previous to the crop, he put on 60 bushels of lime per acre, and planted it to corn; in the following spring, he put it in oats; in the fall put on 40 loads of barn yard manure per acre, and sowed it to wheat and timothy seed, and the ensuing spring with clover. It remained in grass some five years, and received one top dressing of 40 loads per acre of manure. It was mowed four or five years, and gave from 2½ to 3 tons of hay per acre. In the spring of 1835, he gave it another dressing of 40 loads per acre of long manure, allowed the grass to start through it, and then, with a furrow ten inches deep, turned the whole under. The corn was planted in shallow furrows 3½ feet each way. The plow was never used in the field after planting, the cultivation being performed by the cultivator and hoe; and no hilling was allowed. Three good stalks were left on each hill; when the corn was glazed it was cut up, and put in shucks. On this statement, Judge Buel remarks:

"The management which led to this extraordinary product of corn, should be deeply impressed on the mind of every farmer.

1. The ground should be well dunged with long manure.

2. It was planted on a grass ley with one deep plowing.

3. It was well pulverized on the surface with the harrow.

4. The plow was not used in the after culture, nor the corn hilled.

5. The sod was not disturbed, nor the manure turned to the surface; and 6th, the corn was cut at the ground when it was fit to top."

We had marked several other crops as worthy of note, but have room for only the following, which we select as showing what crops of corn may be grown on the very northern verge of its culture, and what the treatment was that produced it.

The soil was gravelly, dry, had been cropped seven years in succession, and manured each year. In the spring of 1838, the hills of the previous year were split, a good dressing of manure put on and plowed in, harrowed, and with a light plow opened into drills 2½ feet apart. On the 19th of May, 1¾ bushels of seed corn was put in a tub, and hot water poured on it, till too hot to stir with the hand. It was steeped two hours, then dried by rolling in plaster, and planted the same day in hills 16 to 18 inches apart, and from 5 to 7 kernels in a hill. On the 5th of June, it had come up; on the 11th, a small plow was passed between the rows lightly, turning the little mold raised to the middle, and care being taken to stir the whole surface of the ground. It was harrowed and hoed the next week, and again the week after that, the owner believing that the maturity of corn may be hastened some two or three weeks by frequent hoeing, while the plants are young. In hoeing, the earth was left nearly flat. On the first of September, the corn was cut up, and husked out the last of the month. The crop, when shelled, fell a few pounds short of 150 bushels of corn per acre. It should be stated, that though plenty of seed was used, only three stalks were allowed to remain in a hill, the best being selected or this purpose.

From the history of corn crops here given, and the mode of culture adopted, we think farmers may derive some useful inferences. We have omitted the great crops of Kentucky, 190 and 196 bushels to the acre, the largest yet grown in any country, as the details of culture were not at hand; and the same may be said of some of the premium crops in this and other States. We state here a few of the most prominent results disclosed:

1. The soil intended for corn must be dry; all experience proves that moist soils are unfit for the culture of this grain.

2. It should be made rich, and deep. Corn will bear heavier manuring than any other cultivated plant, and the soil should be deep to permit the roots to descend beyond all danger of drouth.

3. Preparation of the seed is useful; but no seed over-soaked or swelled for planting or sowing, should be allowed to become dry, as that injures its vitality.

4. The use of top dressing, such as mixtures of ashes, lime, plaster, &c., is established beyond a doubt, Perhaps there are few ways in which labor is better expended, than in placing such composts about corn

5. The uselessness of hilling corn is demonstrated. Not a great crop of corn has been grown for years, in which this practice has been followed.

6. It is proved that corn too thick will not ear; but that in some seasons it will bear to be thicker than others. The failure stated by Mr. Betts, of Newburgh, in the February No. of the current volume of the Cultivator, may be traced to this cause.

7. The impolicy of throwing all the corn put in a hill, when planted, together, is forcibly shown by the success of planting in drills of a single kernel, as in the case of the Messrs. Stevens and Pratts. We frequently hear men

boasting how much they have planted in a day, when, by planting the grain together, they lose more than would pay for many day's work.

We do not expect that every man will raise a hundred and fifty bushels of corn to the acre, even should he use every reasonable effort.—There are too many concurring circumstances, all of a fortunate kind, required to make such crops common; but that any good soil, skilfully cultivated, may be made to give 70 or 80 as a medium crop, we fully believe. Fewer acres planted, and those better manured and tended, would, we are confident, much increase the corn crop of the country, as well as the profits of the farmer.

From the American Farmer.

LARGE CROPS OF CORN.

Corn planters, who are in the habit of growing from four to six barrels of corn to the acre, are very incredulous as to the possibility of raising a hundred bushels to the acre; and yet there are a thousand instances of the fact recorded from time to time in our journal. Could we spare the time and space, we could fill a dozen papers with such facts, well attested; but, as we have neither at our disposal, we shall content ourself for the present by copying the following article from the Albany Cultivator. Its re-publication should, and we trust will, excite a laudable spirit of rivalry, as what one man has done another may do:

The great crop of the United States, whether we look at quantity or value, is unquestionably our corn crop. Four hundred and fifty millions of bushels in 1840, and probably 500 millions in 1842, show the importance of this grain to us. And yet the quantity now grown is nothing, a mere drop in the bucket, compared with what we might do, should circumstances render it advisable to increase the production to an extent that might easily be reached on the present cultivated lands of the Union. In order to show at a glance what might be done, we have taken the pains to collect a few instances of good crops that have been grown among us, and would remark that on a very large portion of our soils, in favorable seasons, and with the cultivation corn should receive, crops like the ones named may as well be grown as inferior ones. It is true, we now and then meet with a farmer or writer who asserts that no man ever saw 75 bushels of corn grow on an acre, and that the farmer should be contented with 25; but the only emotions excited by such are contempt for the ignorant confidence shown, and pity that in this country men should be found so far behind the times.

No. of acres.	Product per acre	Whole product.	Name and place of cultivator.	Year.
1	136	136	R H Rose, Silver Lake, Penn.	1820
1	118	118	John Stevens, Hoboken, N. J.	1820
1	172¾	172	J & M Pratt, Madison, N. Y.	1822
4	170	680	" " "	1824
1	132	132	Sam'l Chidsey, Cayuga, "	1819
8	112	896	Earl Stimson, Saratoga, "	1823
1	174	174	B Bartlett, Eaton, Mad. co., N. Y.	1823
1	116	116	T & H Little, Newburyp't, Mass.	1822
1	115	115	" " "	1823
1	142	142	Mr. Wilmarth, Taunton, Mass.	1825
5	108	540	Chas Bugbee, Palmer, Mass.	1831
1	140	140	Benj Butler, Chenango, N. Y.	1831
1-136		202	Henry Sprague, Worcester, Mass.	1831
1	103	103	"Old Farmer," Rhode Island,	1833
1-12	100	130	S Lathrop, W. Springfield. Mass.	1835
1	108	108	R H Sheldon, Cayuga co., N. Y.	1838
1	110	110	E Humphreys, Caledonia, N. Y.	1837
1	150	150	——— Montreal, Canada,	1838
1	131	131	R Lamprey, Moultonboro', N. H.	1839
1	116	116	Mr Brown, Strafford, N H	1839
1	130	130	P P Pilsbury, Tuftonboro', NH	1839
1	144	144	J F Osborn, Cayuga co, N Y	1841
1	121	121	J Sherman, Cayuga co., N York,	1841
1	112	112	" " "	1841
1	120	120	Mr Ellsworth, Conn.	1840
1	120	120	W Ingalls, Oswego county, N Y	1839
7		1,352	J Myers, Canton, Ohio,	1840
1	154	154	W Ingalls, Oswego county, N Y	1840
2	116	232	B Bradley, Bloomfield, N York.	1841
1	122	122	Samuel Phelps, Cayuga, N York,	1842
1	113	113	Wm Ingalls, Oswego, New York,	1842
1	132	132	W Wilcox, Saratoga, New York,	1842

The number of such crops, where the product exceeded 100 bushels per acre, might be extended to a great length from the list in our possession, but the above is sufficient.—Still we imagine some farmers will say, (some have said so,) that the man who puts manure and labor enough on an acre to get 100 bushels of corn, is a loser. We would ask how? A man may cultivate an acre of corn, and get 30 bushels an acre, and he will be a loser; but it is scarcely possible when the product is 100. In such a case, all over 30 bushels may be considered profit. In addition to this, his acre of land is placed in a condition to produce more good crops, and the additional amount of these is to be added to the list of profits. The man who has brought 30 acres of land to such a state that it will produce 100 bushels of corn per acre, is far better off than the one who has 100 acres, yielding only 25 bushels per acre; and of this fact we are happy to find many of our farmers are beginning to be well convinced. It is unnecessary to say the remarks we have made respecting corn, are equally applicable to any other grain or grass, and that the grand secret of success is to cultivate no more land than you can make rich.

From the American Agriculturist.

TOPPING COTTON.

The December No. of your ever-welcome paper came to hand this day, and among its useful articles, my attention is drawn to that from C. McD., of South Carolina. I must first thank him for the kind manner in which he has alluded to my articles on the culture of cotton, as published in your work, and acknowledge to all whom it may concern, that I do indeed feel happy in having done some good; of having somewhat returned benefits for the very many I have received from farmers and farming papers. The amount of knowledge I have gained by personal experience is too limited to benefit any one; I am therefore indebted to books, papers, and men, for all I am able to retail second hand. Mr. McD. refers to the topping of cotton, and says he does not recollect that I touched on the subject. I did not; not that I thought its advantage at all questionable, but partly oversight, and partly because it was so seldom resorted to, that I feared to be considered as recommending anything questionable, thereby injuring the utility I hoped to accomplish in the articles written for your paper.

In the summer of 1832, I think, Mr. John Thomas, of South Carolina, visited me, and among other practical lessons, he urged on me the utility of topping cotton—declaring that it would well repay for the time, whether it were cotton that would yield only 500 lbs. of seed cotton, or of that which yielded 2,000 lbs. To make his declaration as strong to others as to myself, I here state, that this gentleman at the date mentioned had some 200 hands, was a cotton-grower, and had cultivated it for some 20 to 30 years, on the rich lands of the Congaree, as well as higher up the country on Broad river; he was an intelligent man, and truly a warm-hearted southerner—he is now no more.

In consequence of his urging me to try it on a small scale, as this country was new to both of us, I did so, and have had cause to follow it up ever since—sometimes neglecting at the proper time, from pressing occupations, or the season. I kept no memorandum of the difference, though I commenced farming, by keeping notes; but I am confident if followed up, that it will be beneficial two out of three years; and on most lands, will not injure the third year. I give my reason why it may not benefit every year. If the season is wet after the time of topping, say from the 25th of July to the 5th or 10th of August, there will shoot up water sprouts, which will shade the under bolls so as to prevent them opening well; it will make a heavy top crop of bolls, which will cause the stalk to bend down, and if any wind comes with the rain, the stalk can not regain its upright position. If the season has been very dry, the cotton will pretty much cease growing by the time of topping, and will not then be advantageous, unless done earlier—which, if I ever have another chance, I will try.

Topping is advantageous for the following reasons: the forms or squares, and small bolls, will not be cast off so readily, the upper bolls will mature sooner, make less leaf to be falling on the cotton, and the top bolls, principally, will be larger than otherwise. Last year I topped cotton on the first day of August—this year I did not top at all, owing to the wet season. I would not top cotton during a wet year, till I had more knowledge on the subject, for fear of the water shoots, but would not hesitate if a dry one.

Benefit of Manure for Cotton.—I have not seen marl used, but I can satisfy any one who doubts the effect of manures for cotton, and of cotton-seed especially—that no man ought ever to think of leaving a level farm, the house and friends of his childhood to seek rich lands. This year has been more favorable for thin lands, than usual; but whether for stiff clays is rather doubtful; and whether any manured land did better on this account, I know not—but here is the result. My orchard lot contains 24 acres, in which are ½ an acre in grass, ¼ in a flower garden, and near ¾ in roads and gin-house; I therefore say there are 23 acres in cotton, 9 of which were manured with cotton-seed, and about one with barnyard manure. From the 23 acres I have gathered an average of 1,138 lbs. per acre. The poorest land on the place, and the poorest portion was manured; a part of the unmanured, say 4 or 5 acres, could not have averaged over 700 lbs. per acre. This field has been in continued cultivation since 1825; has on it some 270 peach-trees, 3 years old; 50 small pear, apple, and cherry, with some 30 large peach-trees; besides, two rows of morus multicaulus, forming an avenue to the house. If the trees were deducted, there would not be over 21 acres, which would give me 1,150 lbs. on an average; with enough more, if gathered, to make 1,300 lbs. Another field that is high and dry, gently undulating, cleared in 1833 or '34, and is much richer land, will not give me that average, and was at no period of its growth as good, as was the manured portion.

Pleasures and Advantages of Remaining at Home.—Let any man "cypher" up the cost of moving—the cost of land—the cost of building—the cost of clearing—to say nothing of the deprivations in a country where farms are to open—the loss of dear associates—our schoolmates—and the time required to prepare for making money, and I venture on it, no sane man will move. I want to see many from those old countries here: not that, Indian-like, I wish them to suffer because I have, but that I want a thicker-settled country, and more demand for land. Yet, with all this, I would recommend them to improve at home where they now are; husband their resources; study the economy of manures, improve agricultural implements, stock, seeds, and the best rotation and management of crops.

Would that man merit aught but opprobrium, who would urge his fellows to sever every tender tie that binds him to "Home, sweet home;" to even the "old oaken bucket;" to the soil; to his associates and relatives, for the purpose of getting richer land, which, when cleared and cultivated, as is now done, will cause the young flock to wander again—and, in reality, only serve to support one generation? I say nay, and therefore urge it on our brother farmer, C. McD., as on all others in that good old State, to make it a part of their regular business to save, gather, and make manure; they will find that three years of labor, with the cost and loss of moving, will give them such lands, that they will cling to the "old south state," even if they live in the "Peedee country—God bless you."

Leibie's Letters.—I have just finished reading Leibig's Familiar Letters, and a capital fine thing it is. I wish it had been published prior to his other works, as I think it would have been more generally beneficial; whereas, many who

purchased the first works of his, have not read them through, and will suppose this to be a similar work. But the form of letters makes it indeed "familiar," and it treats on "familiar" subjects. M. W. PHILIPS.

Log Hall, Miss., December 21st, 1843.

From the Albany Cultivator.

LETTER FROM THOMAS AFFLECK, ESQ.

We give below some extracts from a most interesting communication received from our friend, Mr. Affleck, of Ingleside, Miss. The extracts relate to topics of interest at the north as well as the south, and will aid in throwing light on the productions and modes of culture in that fertile section of the Union. The doubts which have existed as to the capability of the south to produce its necessary provisions, or to grow the principal varieties of northern fruits, doubts which had arisen more from the neglect of the planter than any other cause, will soon be dissipated by the example of a few such men as are now engaged in enlightening that section of the United States as to its capability and true policy.

Mr. Affleck has transmitted to us two specimens of cotton in the seed; one a specimen of good Mexican, and the other a specimen of that shown by Dr. Lovelace, at the Adams County Fair, Miss., and supposed to be a hybrid between the Mexican and some long stapled cotton. Dr. L. not having completed his experiments, did not disclose the manner of its production, but we can say that a more beautiful specimen of cotton than the improved, has never met our eye, and shows most conclusively, we think, what a field is open for the well-informed and scientific cultivator, in the improvement of this national staple.

The following request of our friend, we place here, that it may meet the eye of Dr. Cloud:—"Let me beg of you, as I do not know his address, to say to Dr. Cloud, that if he will forward me a bushel, or what he can spare, of his *improved cotton seed*, to the care of Ringgold, Ferridy & Co., New Orleans, he will confer on me a favor that I will gladly reciprocate." The extracts relating to sheep, pigs, and growing corn for fodder, will, we are sure, arrest the attention of the reader:

"There is but one difficulty as to pastures, and that is, that none are made. No one attempts to form pastures in any other way than by turning out fields after they will no longer produce cotton or corn, and being satisfied with the scanty crops of sedge and Natchez grass, and of briars which they may yet be able to support. Within the last year or two, however, better things are attempted. I have seen very promising woodland pastures of orchard grass; and winter pastures of Egyptian oats and rye are becoming common on well managed plantations. The cane swamps afford tolerable grazing; at all events, the swamp cattle manage to grow and even fatten on the abundant browsing they find there, and make pretty good beef and capital work oxen. These are the rams-horned, brick-colored cattle, known as Piney woods, swamp, Opelousas, or Attakapas cattle—descendants of the original Spanish stock, and yet found in those regions, uninjured and unimproved. During the winter, we have no lack of abundance of feed for all kinds of stock; and in summer we have only to have recourse to Bermuda grass, to keep every thing sealtat. This is the most nutritious grass I have ever seen; and where exposed, the most closely grazed. It resembles Nimblewill, (Triticum repens?) but is more delicate in its appearance, leaves much more numerous and narrower, stems small and solid, growth rapid; and when in meadow, it does not attain a height of over 12 or 14 inches. Yet I have seen this delicate looking grass afford, at a second cutting, between 5 and 6 tons to the acre of dried hay. The first and third cuttings not so good. It stands so thick on the ground, and its numerous lateral leaves so closely interlocked, that a good hand cannot cut over more than half an acre per day, and has to cast aside the swarth with his foot, at every second or third cut; the scythe blade passing under and cutting the grass, without laying it over. It is a troublesome grass in the cotton field, but can be got under by a crop of corn and pumpkins, or oats followed by peas; it can bear little or no shade. It is invaluable for coating embankments, and is of incalculable benefit on the levees of the Mississippi. It is stated upon good authority, to be 'the Doul grass of the middle provinces of Hindostan.' Whoever brought it to this country, is as deserving of a monument to his memory, here in the South, as is Parmentier in France.

"Within some three or four years, another creeping grass has made its appearance here, said to be a native of and abundant in Cuba, and is rapidly spreading; that suits their upland, and thrives better there than Bermuda, and is green and grows all winter, whilst the other is cut down by the first frost. I am now using it in my garden and grounds for edgings, grass plats, &c., and think it will answer well, as being easily kept within bounds, of a dwarfish growth, forming a close sod, and remaining green summer and winter. From the reports of Dr. Phillips and others, it would appear that in the Musketo, a Texian grass, we have another valuable resource, particularly for winter pasture. Dr. P. presented me with a small quantity of seed, which is in the ground.

"You see how I ramble along! I will now return to my forgotten text, Sheep in the South! You are right,—'the old notion of the impossibility of growing good wool at the South, is giving way to the evidence of facts.' The doctrine that all wool-bearing animals except the negro, have their wool, in a very short time, turned into hair in the South, is also exploded. True, the common sheep of the country, bred in and in for generations, and ranging now in miserable burnt up pastures, and again in the cotton fields, where they become excessively fat on the tender winter grass; the one season shorn, and the next allowed to surrender their coats to the briars—such sheep have thin, scanty, hairy fleeces. But they form no criterion. Are there no such animals elsewhere, 'bred by, and the property of nobody in particular, the United States over?' Why is the coat of the black-faced sheep of the mountains of Scotland, so coarse and hairy, whilst that of the Merino of Spain and of New South Wales, where they scarcely ever see frost, so fine in its staple? I feel satisfied of one thing, that the finer and more spiral the staple, and the closer and heavier the coat of wool, and the greater the abundance of yolk, the better will the wool on the sheep's back resist the injurious effects of the sun. Sheep are kept by the planter, in almost every instance, for the mutton alone; some few manufacture the scanty crop of wool. The mutton is very fine, almost equal to that of the mountain heather-fed sheep of my native country—and that, you know, is a great deal for a Scotchman to say! The native sheep of which I speak, are remarkably full and broad in the loin, and the saddle is of course proportionably good. Sheep seem to me always to be in good health here—one never hears of the halt of a large flock dying off within a few days, as is by no means unusual in colder countries, where numbers have to be penned together for a considerable length of time.

"We have thus, you perceive, no scarcity of beef and mutton. Many planters in Mississippi are now making their own pork, or are exerting themselves to do so. In the neighboring County of Jefferson, this is more particularly the case. I know of several there, who last season killed and cured from 100 to 200 head; one who killed 350, and another over 700 head, all for their own home consumption. The gentleman last alluded to, assured me that all of his hogs were fattened entirely on peas, which were planted between the corn rows at the last tending, and the hogs turned in on them after the corn is gathered; finer bacon I have never eaten. This gentleman has killed his own pork ever since the second year of his farming, some thirty years; tans his own leather, makes his own shoes, harness, &c., wagons and farming utensils; manufactures much of his winter clothing, and this without allowing himself to be influenced by the high or low prices of cotton; though, of course, when cotton brought from 15 to 25 cents, he was, to all appearances, sinking money in employing his hands anywhere else but in the cotton field. However, the best proof that his system was the true one, is that he is one of the wealthiest men in the country, living in the greatest comfort, his family settled round him, and his negroes comfortable and happy.

"A word more on hogs. I find that the pigs brought here from the North, grow none after warm weather sets in; and grown animals suffer much during the first summer; whilst their produce, bred here, grow and thrive well. I have imported Newberry here, and a fine lot of thorough-bred sows, from which I am raising my plantation stock—will they do?

"You speak of being 'anxious that some of your southern friends would try the experiment of sowing corn broadcast, as an article of food for animals, to be used for soiling during the summer, and cured and fed, after being cut, to them in the winter; and ascertain what the practicability and expense of keeping animals in this way would be.' Corn leaves, you are aware, are now used extensively; but would not the stalk, cured and cut into chaff, add much to the ability of the planter to feed stock, without materially adding to his expense? It would, and in my own case, does do so. At 'Ingleside,' I feed nothing else. My farm here only consists of 40 acres of an old field, which the small force I keep here enables me to improve very slowly; the more, as to it is added five acres of garden, &c., requiring much manure. As I keep five head of horses, two mules, two yoke of cattle, from two to six cows and their calves, and some twenty to thirty head of hogs, I was forced to try some such means of making fodder, or have blades to haul from one of the plantations. In 1842, I sowed some corn broadcast, but the dryness of the season and the poverty of the land, prevented it doing much. I did not cut it; but the stock, when turned into the field, grazed on that patch of corn as long as there was a stump of it left. That winter I fed principally on crab grass hay, and corn cut and shucked Kentucky fashion—which does not do well. This last season I drilled several different patches of corn at different times during the spring and summer; drills from 2½ to 3 feet apart, and the stalks almost touching in the drill. It all did well; so well that though I had not more than an acre and a half in all, I fed my stock on it during the whole summer, passing the green corn through the cutting-box, with a proportion of about one-third or one-fourth of dry fodder; cutting down and curing what was left of each patch, when the next sown became ripe enough to feed out. I have thus sufficient fodder to do me, I think, or nearly so, until oats are ripe, and my drilled corn comes in again. It must be in tassel, or tasseling, before horses and cattle at all relish it; and hogs, though they eat it greedily, fall off on it; for the reason, I think, that they reject all but the juice, and hang round the fence all day, waiting for more. I have tried Egyptian millet and Guinea corn, but prefer the maize.

"Pulling corn blades to make fodder, I consider the most unhealthy and unprofitable work done on the plantation."

CURRYING COWS.—Cows should be curried as often as horses, particularly when they are shedding their hairs. Independent of other consequences, it tends to prevent them from licking themselves, by which they often swallow the hair and receive injury.

TO PREVENT THE BLEEDING OF VINES.—If a piece of moistened bladder be folded over the end of the vine which is cut, and then bound tightly around with wrapping thread, it will effectually prevent bleeding.

WEDNESDAY, MARCH 20, 1844.

THE BACK VOLUME.

All new subscribers who may desire it, can obtain the first volume, neatly bound in boards, at one dollar the volume.

☞We must throw ourselves upon the indulgence of our readers, for the delay in the appearance of this number. So many of our compositors have been confined, during the last ten days, with the Measles, that it was impossible, as we could not supply their places, to make a more rapid progress. The same cause may delay, for a few days, the issue of the next number—after which, we hope to appear with our accustomed regularity.

AGRICULTURAL PAPERS FOR DISTRIBUTION.

The following paragraph, which we find in the "American Agriculturist," we commend to the attention of Southern Planters, as well for the excellence of the example as for the evidence it bears of the zeal of our Northern brethren in the cause. On reading it, we were forcibly struck with the contrast which it presents between Northern and Southern Agriculturists. It is by no means flattering to our Southern brethren; and, as those are said to be our best friends, who tell us plainly our faults, we will sketch the outlines of the pictures as they were presented to our mind, and invite you to look first upon one picture and then upon the other.

Throughout the Middle, Northern and Eastern States, Agriculturists have attained a higher degree of proficiency in their vocation than any other portion of the Union. There, almost the whole face of nature, the very fields, are in as high state of cultivation as the great mass of the gardens at the South. Every thing bears upon its face the impress of enterprise, zeal and progressive improvement. The farmer clears his lands and cultivates them, not to exhaust them by a system of cropping, which annually diminishes their production, but his constant effort is to enrich them and increase his crops.—Now, to arrive at the proper manner of doing this most successfully, he is content to be taught by those who, combining a higher degree of scientific attainment, have tested their discoveries by experiments. Hence, he supports and reads Agricultural papers; and when he has seen and felt the good effects thereof, upon his constantly improving soils and his well-filled granaries and store-houses, his zeal in this great and most philanthropic cause is aroused, and he is not content that he alone shall reap the benefits of Agricultural journals, but he becomes desirous that their influence should be extended to every class of society—and therefore resolves upon gratuitous distribution. This is true patriotism—it is the very essence of philanthropy; and yet, this is done by a people who are not unfrequently sneered at by our Southern brethren for a want of liberality—and sometimes charged with a "littleness" in money matters amounting to meanness.

That is one side of the picture. Now, let us present the other: but, before doing so, we beg leave to remark, that we are wholly and entirely identified with the South, by birth, education, feeling and interest; and we therefore claim the right, and assume the privilege and responsibility, of talking to you plainly. If our frankness offend any, we shall regret it—nevertheless, it is a duty we owe to ourself, as well as the great cause which we are zealously endeavoring to support and sustain, that we deal candidly.

What, then, we ask, is the state of Agriculture and Agricultural improvement at the South? We ask every man, who reads this article, to stop here and look around him, to see and contemplate the vast amount of land which has been exhausted by a system of culture, the very reverse of that practiced by our eastern brethren, and is now turned out to waste. Enquire, if you please, who, among all those who are thus annually destroying the productive properties of the soil, reads an Agricultural work. Go among those destructives of the soil, and seek to enlighten them upon that subject, which most pertains to their interest and happiness, the improvement of their lands, and learn how often you meet the response—"No man can tell me anything about farming." Ask them to subscribe for, and read an Agricultural paper, from which they cannot fail to derive much valuable and interesting information, and ascertain how often you are tendered as an excuse, "I have not time to read," and "I cannot afford to pay the subscription."

What a melancholy picture does such a state of things present to the eye of the philanthropist! Here are a people, strictly an Agricultural people, devoted to it from interest, habits and tastes, manifesting no interest or zeal for the improvement of that science, by which they derive their daily subsistence—pursuing, from day to day, and from year to year, a policy which impoverishes their lands, materially effects the happiness of the domestic circle, and cripples the commercial relations of the country; and yet, when you urge upon them the adoption of measures which are calculated to correct these increasing evils, you are told, with the coolest indifference, "we want none of these things." Yet, such is Southern Agriculture generally, and such are Southern Agriculturists, with some few honorable exceptions. There is, in truth, none of that zeal diffused among the great mass of the Southern people, which is such a distinguished characteristic of the Northern and Eastern Agriculturists. There is not to be found that spirit of liberality, (although we boast often that we are the very essence of liberality itself,) which prompts a planter, or even an Agricultural Society, to subscribe and pay for a paper for gratuitous distribution. On the contrary, in this money-loving age in which we live, the great mass seem to live for themselves alone—they have few cares for society, fewer for those who are to come after them; and, notwithstanding their great object seems generally to be the accumulation of more money, they neglect the most important means to be employed for the accomplishment of their purposes.

But we must desist—and, in doing so, beg leave again to call the reader's attention to the following paragraph:

THE AMERICAN AGRICULTURIST FOR GRATUITOUS DISTRIBUTION.—The Hampshire, Hampden and Franklin Agricultural Society of Massachusetts, has ordered 25 copies of our paper for gratuitous distribution among its members, with a view of giving a stimulus to an improved system of agriculture. We have also 75 copies ordered among the different societies of this State for premiums. We hope that this will be an incentive for others to go and do likewise. In all such cases we shall put our paper at the lowest possible rates at which it can be afforded.

VALUABLE SEEDS.—In our last, we inadvertently omitted to make our acknowledgements to the Hon. H. L. ELSWORTH, of the Patent Office, for a fine collection of valuable seeds, comprising several varieties of corn, wheat, garden seeds, &c. &c.

TEXAS COTTON SEED.—Our friend, JOHN W. GRAVES, of Newton county, has sent us about half a bushel of Cotton Seed, for distribution among our friends, which he describes as being very prolific, and producing a very superior article of Cotton. The concurrent testimony of his neighbors and overseers, to the same facts, are very conclusive and satisfactory—which we regret our limits will not permit us to insert today. We shall be pleased to distribute the few seed we have among our friends who will call at the office.

PEARIDGE, HARRIS CO., GA., March 8th, 1844.

MR. EDITOR—I noticed in one of the February Nos. of your valuable paper, a letter from W. W. Bates, of Eufaula, Barber county, Ala., in which he states that many hogs and cattle have been lost in his neighborhood, during last fall and winter, by turning them into pea-fields, and asks a remedy through the columns of the Cultivator.

I have been engaged in the pleasant business of farming for the last four or five years, during which time I have raised four crops of peas, which I consider a very important article of food for hogs. My practice is to feed my stock bountifully for three or four days previous to turning them upon peas, with a heavy feed just as they are turned in the field, where they remain until the peas are destroyed, having a free access to water and a plenty of salt and ashes during their stay. I am happy to say, I have yet to loose my first hog or horse from eating peas. I have never suffered my cattle to be turned upon fresh pea fields.

I am, sir, yours, &c.,

THOMAS H. BENTON.

☞The most valuable part of every man's education is that which he receives from himself, especially when the active energy of his character makes ample amends for the want of a more finished course of study.

From the American Agriculturist.

SUBSOIL PLOWING.

We are highly gratified to observe an increased attention to subsoil plowing, for we consider if it could be generally introduced among us, it would be found one of the greatest agricultural improvements of the age. In vol. I, page 199, we gave full details of the successful operation of the subsoil plow in England, where it was shown, that by its use, crops may be doubled without adding a particle of fertilizing materials to the land. Two years subsequent experience by the farmers of that country, corroborate the benefits to be derived by the free use of the subsoil plow, for grain as well as root crops. Mr. Tilley recently asserted before the Cornwall Agricultural Association, that he had the past year raised hundreds of roots of mangel-wurzel, weighing 25 lbs. each; that the crop of these per acre, as well as carrots and turneps, was at least doubled by subsoil plowing.

Five years ago we had a piece of land containing 2¼ acres of a hard clay soil, which, with the best management we could bestow upon it, yielded less than 150 bushels of potatoes to the acre, and 400 of sugar-beet—while parsneps, carrots, or any long roots, it would scarcely grow. We had just heard of Mr. Smith's subsoil plow in Scotland, and determined upon an experiment. We had no plow of this description, nor could we then obtain one; we accordingly took the mould-board off from a large, strong road plow, and used the point of the share alone for subsoiling. We plowed the land in the fall of the year, by taking a common plow and one yoke of cattle, and turning over a surface furrow six inches deep. We then followed directly after this in the same furrow, with three yoke of cattle attached to the road plow, stirring the soil eight inches deeper, making fourteen in all. This we then bountifully limed, and the next spring as bountifully manured and planted it with roots, and the following autumn obtained over 1,100 bushels of sugar-beet to the acre from it, and other crops in proportion.

Subsoil plows may now be had in this city, of excellent pattern and strongly constructed, from $10 to $15 each, which will stir the earth from 12 to 18 inches deep, requiring from two or five yoke of cattle to move them, according to the nature of the soil, and the depth required to plow.

From the American Agriculturist.

CULTURE OF ASPARAGUS.

Since the Spanish method of cultivating asparagus by the seashore has become known in England, a complete change has taken place in the manner of growing it there, salt being added now in moderate quantities to the manure used to enrich the beds; it is also spread broadcast upon them, at the rate of 1 to 3 lbs. per square yard, after forking them over in the spring. This makes it much more palatable and tender. The month of April in this climate, as soon after the frost is well out of the ground, is the best time to apply the salt dressing to the beds. A compost of horse manure, mixed with leaves and vegetable mould from the woods, together with a little charcoal, is one of the best manures we ever made use of for enriching the asparagus bed.

Visiting Dr. King's fine farm at Perth Amboy, last summer, we were walking with him one morning along its boundaries on the bay, when within a few yards of the water on a slight ridge of sand, which was subject to be wet by the salt spray, and inundated by a high tide, Dr. King pointed out to us a natural asparagus bed; and although it was late in the season for this vegetable, and most of this before us too much grown for good cuttings, upon our mentioning to him the Spanish method of cultivating it, he directed some of this to be cut and cooked for dinner. To our surprise, notwithstanding it was so old, it proved very delicate and palatable, and completely satisfied us that its superior taste was owing to the salt dressing it received from the sea-water. Gardeners, in the interior of the country, will do well to try the experiment here recommended with salt; it will cost but a trifle, and do no harm if it produces no good. We scarcely recollect eating delicate asparagus in the valley of the Ohio; it was generally of large growth, tough, and bitter, and none that we ever tasted at the west, did we find to possess the peculiar flavor of that growing naturally at Dr. King's.

To Select a Good Wife.—Choose a woman who has been inured to industry, and is not ashamed of it. Be sure she has a good constitution, good temper, and has not been accustomed to "*dashing*" without knowing the value of the means, is not fond of novels, and has no giddy and fashionable relations, and you need inquire no further—*she is a fortune.*

Illustration of Early Rising.—The difference between rising at five and at seven, in the course of forty years, amounts to 58,400 hours, or ten years, allowing eight hours in twenty-four for sleep. Thus, the man who saves these hours, saves in forty years ten.—These hours, spent in useful reading, having the balance of the day, if a laboring man, for meditation, would be equal to twenty years continual study.

CONTENTS OF THIS NUMBER.

	PAGE.
Asparagus, Culture of	48
Agricultural Papers for Distribution,	47
Currying Cows,	46
Corn, Indian	43
" Large Crops of	45
Cotton, Topping	45
Dana's Prize Essay on Manures,	41
Letter from Thomas Affleck,	46
Plowing, Subsoil	48
Texas Cotton Seed,	47
Terms, Explanation of	42
Vines, to prevent the bleeding of	46
Valuable Seeds,	47
Williams' Premium Essay,	42

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mh 6

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August 30. 18-tf

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Upper	side	1 25	@	2 50
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Molasses, N. Orleans	gal.	28	@	35
Havana	"	25	@	30
Nails	lb.	4½	@	6
Oats	bush.	37½	@	50
Peas	"	62	@	75
Sugar, New Orleans	lb.	7	@	9
Havana, white	"	11	@	12½
" brown	"	8	@	9
Muscovado	"	7	@	9
St. Croix	"	8	@	11
Porto Rico	"	7	@	10
Lump	"	13	@	14
Loaf	"	13	@	15
Double Refined	"	14	@	16
Salt, Liverpool ground	bush.	45	@	50
" "	sack	1 75	@	2 50
Steel, German	lb.	15	@	16
Blistered	"	8	@	12½
Twine	"	20	@	30
Tea, Bohea	"	50	@	75
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SOUTHERN CULTIVATOR.

VOL. II. AUGUSTA, GA., APRIL 3, 1844. No. 7.

COMMUNICATIONS.

For the Southern Cultivator.

☞ MR. EDITOR—Enclosed I send you one dollar, which I see, from your Prospectus, is the price of a year's subscription to the Southern Cultivator. This is what I should have done long before this, but for the belief, which I entertained from the first, that your truly valuable paper would not live out one year's subscription—that is, was destined, like many other works of a similar character, which have been gotten up at the South, to come still-born from the press, and perish for the want of patronage to sustain it. In this, I have been agreeably disappointed; for it seems I had greatly underrated the spirit and good sense of my brethren of the plow; and, by way of making both you and them some amends for past neglect and injustice, I now send that which alone, in my humble opinion, can render an agricultural paper profitable to the publisher, and useful to its patrons, viz: an addition to your subscription list, and to your list of contributors.

I have been a regular and attentive reader of the Farmer's Register and Albany Cultivator, from the period of their commencement up to the time when the Farmer's Register, (to the everlasting shame and disgrace of Southern planters, be it said,) was permitted to languish and die for the want of patronage--and of the Cultivator to the present; and, as a farmer and a man, I can say, truly, I have been signally benefitted by them. I shall always entertain the highest gratitude and respect for the memory of the distinguished founders of those two works. I have, however, long since seen and felt that the Albany Cultivator, ably conducted, and eminently practical and useful, as it is, is not every way suited to the circumstances and condition of Southern Agriculturists: for, although the Albany Cultivator is all that the great mass of its readers could desire it, yet it must, and does, necessarily contain a great deal of matter which is altogether inapplicable to our husbandry, and consequently of no practical utility to us. It is, therefore, with great pleasure, that I welcome the permanent establishment of an agricultural paper in Georgia; and I shall hail it as the harbinger of a higher and brighter improvement in the agricultural prosperity of our State. Different latitudes give rise to different climates, soils and productions, and consequently to different systems of husbandry. Hence, a system of agriculture which, in all its details, would be perfectly applicable to New York and the Eastern States, would not be at all suited to Georgia and other Southern States. There are, to be sure, certain great and leading principles, (which it is needless now to enumerate,) that are applicable to the well regulated agriculture of every country; yet, it is perfectly manifest to every intelligent farmer, that the carrying out of those principles in detail must be regulated by, and depend jointly upon, soil, climate, and the kind of produce most in demand, and which is rendered most profitable. It is precisely for this reason that it strikes me, every State should have an organ of its own agricultural interest, and that the farmers of Georgia should use all the means in their power to foster and sustain a work which is calculated to exert such a salutary influence in the agricultural reformation of our State.

The fact is, Mr. Editor, there is a large portion of Middle Georgia—and, indeed, I may say, of all the old counties in the State—that is completely worn out. The lands have been, by a succession of hard cropping, shallow up-hill and down-hill plowing, and other imprudences, denuded of a large portion of the richest soil, of which any country of similar extent could boast; and we are now reduced to one of three alternatives, either to be content with scant crops, poor returns for our labor and capital; and, in the end, with poverty; abandon our homes, and emigrate to the *far, far* West; or, to commence, in right good earnest, the work of improving our lands. I think a few facts will serve to show which of these three alternatives it is obviously the interest of every planter of Middle Georgia to adopt. Taking it for granted, that no sensible and industrious planter will be content with the first, I shall endeavor to point out, in this article, some of the objections and difficulties which lie in the way of choosing the second. In the first place, there are now no wild lands to go to. The Indian title to all the land, lying within the limits of the cotton growing States, has been extinguished. It has been the policy of the General Government, ever since it went into operation, to extinguish the Indian title to the land occupied by them, within the different States, as speedily as possible—and the consequence was, there has never been a time, within my remembrance, when there were not almost yearly acquisitions of Indian territory, in some one or another of the Southern and Western States. Good land was consequently very abundant and very cheap; and the effect of this abundance and cheapness of land, was to beget a careless, slovenly, *skinning* habit of farming. Indeed, the system of husbandry, which the first settlers of our country adopted, has often reminded me of the practice of hunting wild cattle, on those extensive Pampas in South America, by the Spaniards—where they slaughter, annually, hundreds and thousands of the finest, fattest cattle in the world, purely for the sake of the hide alone. And, as the skill and dexterity of these Spanish huntsmen is estimated by the number of cattle which they slaughter, and the quantity of hides which they take; so it would seem that the skill and abilities of a Georgia planter of the *old school*, was measured by the quantity of land which he wore out: for he who wore out the most land, was the hardest worker, and consequently the greatest *skinner*. The efforts of both are directed, with especial reference, to the *skin*, without any regard to the *carcass*. This *skinning* business, combined with the extended cultivation of cotton, the most exhausting and destructive to land, (when not skilfully managed,) of all other crops, has resulted most disastrously to the lands in the old settled parts of Georgia; and I heartily rejoice that the time has come, when these Georgia *land-flayers* will be necessarily compelled to desist from their *skinning* operations, and employ a portion of their skill and their efforts in curing and healing the wounds which they have so industriously inflicted. And I would here take occasion to recommend to the favorable notice of all whom it may concern, a certain *patent salve*, invented and prepared by Dr. Bommer, which is very highly spoken of by those who have tested its virtues, and is said to have a charming effect on all *ulcerated* land. If this should fail, it would be well to try a poultice of *muck*, which is highly recommended by Dr. Dana. One impediment in the way of agricultural improvement is now happily removed, for we have not now the comfortable assurance that a few more years will bring about another *Land Lottery*; and when our land is worn out, that just over the Oconee, the Oakmulgee, the Flint, or Chattahoochee Rivers, there is still a fresh country in reserve, waiting to be distributed by that most unjust, unequal and immoral, of all the modes of portioning out the public domain—a Georgia Land Lottery. The time is past, when land can be had without money and without price; and he who now comes into the possession of a landed estate, must expect either to inherit it, or to pay for it. If, then, we make up our minds to emigrate, the question forces itself upon us immediately, Where shall we go? Shall we go to Southwestern Georgia, New Alabama, Mississippi, Texas or to Oregon? Now, before we decide to take so important a step as that of breaking up and abandoning our homes, the country of our nativity, and of severing those ties which bind men together in a state of society, we should weigh well the inducements, we should count up all the cost, we should enumerate all the sacrifices, and be very certain that the balance is largely in favor of removal. If our inclinations lead us to Western or Southwestern Georgia, we will find that the land in those sections has long since passed from the red man into the possession and occupancy of the white man—that pretty much all of the good land and choice situations are already occupied, and those good lands and choice situations can now be had only by paying the highest sort of prices for them—prices ranging from twenty to thirty per cent. higher than lands in the old settled parts of Georgia. We shall be driven to the necessity, then, of paying higher prices for land, than land of similar quality can be bought for in our own immediate neighborhood—or, we must content ourselves with settling the poor land, which has been refused and rejected by all who have preceded us. Now, these difficulties will apply with equal force to every other cotton growing State, Florida and Arkansas excepted. As for Texas, I leave that out of the question; for I presume no prudent planter would risk the safety of his family and his property in a country so liable to revolution as Texas, unless it should be annexed to the United States.

To pay the prices for which good land has been selling in those sections, at the present prices of produce, would be ruinous. To break up, and encounter the expense of moving, the hardships and inconveniences, incidental to all new countries, to cultivate poor land, when we can get thousands of acres of poor land around our own doors for less money, would be foolish. The obvious conclusion, then, to which we must come, seems to me to be this: If we are compelled to have land, and prefer to pay a high price for good land, it is better to purchase it here; for, even in these old counties, there are still to be found extensive tracts of good land; or, if we choose to take the cheaper and poorer land, it is *better* to have it *here*—here, in this delightful region, where we can breathe a wholesome atmosphere, drink pure water, enjoy as good health as the people who live in the mountains; where we have good society, good

schools, good markets, a good currency, and *no repudiation*—than to plunge ourselves and families into those sickly countries, to breathe the poisonous vapors with which the atmosphere is loaded, to drag out a miserable and wretched existence, exposed continually to disease, pain and death. I do not here give assertion for facts. Unfortunately, the truth of this is attested by too many melancholy proofs. And here, by way of illustrating the truth of what I assert, I will give a few statements which will serve to show the fatal effects of the climate of those countries upon the inhabitants.

Between the years 1800 and 1825, there moved from this county, some twenty or twenty-five hardy, industrious, enterprising planters, who settled upon the rich river bottoms and table lands of Montgomery and Autauga counties, Alabama. Most of them were in their freshest prime—robust, hearty, hale men—choice specimens of the race of Georgia planters of the *old school*. Out of all this number, I know of but one who now remains. All, save one, are gone—gone to swell the list of that mortality which annually sweeps off hundreds and thousands into untimely graves; whilst many of their neighbors, who remained behind in this county, and who occupy the very plantations which they left, are still living.

Within the last eight years, between forty and fifty farmers have moved from this county, and settled in Southwestern Georgia, and New Alabama. More than half of these have died. None, it is believed, have greatly improved their estates. Indeed, most of them that have died, either left their estates insolvent, or greatly impaired.

Now, the fate of these men—sad and melancholy, as it is—has had, and will have, a good effect upon the planters of Middle Georgia. Their example will serve to teach us to appreciate, as we should, the blessings of health—to render us better content with our situation, and to cure us of that restless desire for change and pernicious novelties, which is so common to our race.

These are some of the reasons which have influenced me, (and I doubt not hundreds of others,) to come to the decision to spend the remnant of my days in this old worn out county; and to direct all my energies and efforts, as a farmer, to the preservation and improvement of my land. Having made up my mind to do this, and being a planter from choice, as well as from necessity, I am desirous of availing myself of all the helps within my reach.

A MIDDLE GEORGIAN.

Sparta, Ga.

From the Dollar Farmer.

VALUABLE IMPROVEMENT IN AGRICULTURAL MACHINERY.

Dean Swift once said, that "the man who makes two blades of grass grow where but one grew before is a distinguished public benefactor," and we think the commendation is equally applicable to the man who makes one ear of corn as beneficial as two were formerly. After all the great improvements of the last few years in breeding animals of the stock kind, there is one improvement worth them all—we allude to the great improvement lately made in feeding stock. Many valuable methods have been placed before the public for fattening stock in an economical manner, and the investigations on this subject have led to fruitful and valuable discoveries. We have no intention to review these things at present; our object now is to call attention to a branch of this department of agriculture about the value of which there is no contrariety of opinion—*the crushing of stock food*, by which provender undergoes the material process of mastication before it reaches the animal, the labor of digestion being thus lightened.

In a report, made by Mr. Coleman, to the Massachusetts Legislature, after a labored investigation of the subject, we find a decided preference for Indian corn, as the basis of the food of stock, and the author of the report thinks, that where seventy bushels of corn are the product of an acre of land, this is the cheapest food for animals. In order to make this valuable article still more important and useful, many machines have been invented, for crushing the corn and cobs, and the most of them are but sorry contrivances.

Of the value of corn thus prepared, no one can doubt, who has a proper knowledge of the subject. The intelligent and observing farmer, who should try the experiment of feeding a number of healthy animals on ears of corn, and the same number on the same quantity of corn crushed, would not be long without a machine for crushing it. An extensive feeder, for the Philadelphia market, says, "that a bushel of meal made of corn and cobs is fully equal to a bushel of meal made of corn and oats, and that animals never cloy on the first named meal." A member of the City Council of New-York, in speaking of the public yard, says, that "by cutting the hay, and grinding the oats, eight bushels of oats, and fifteen cwt. of hay fed the same number of horses, doing the same work, the same length of time, and kept them in as good condition, as twenty-four bushels of oats and thirty-five cwt. of hay did when fed whole."

In corroboration of these statements we have the following from the second volume of the Cultivator:

"The cobs of corn undoubtedly contain much nutriment. P. Minor, of Virginia, [see American Farmer, v. 1, p. 324,] has given us the results of a nicely conducted experiment to ascertain the amount of this nutriment. He took ten bushels of corn and cob, weighing three hundred and sixty-seven pounds, and ten bushels of shelled corn, and subjected them to the process of distillation. The product of the corn and cob was thirteen gallons of spirits, and of the pure corn eighteen gallons. Estimating that the ten bushels of corn and cob would have given five bushels of shelled corn, which is the general proportion, there will be left, as the product of the five bushels of cobs, four gallons of spirits, or nearly half as much as was afforded by five bushels of corn. Mr. Minor remarks that the cob affords other nutritive matter than the saccharine, which is converted into alcohol, as mucilage and oils. We have besides abundant testimony, in the practice of eminent farmers, of the utility of feeding cob meal to animals, always mixed, we believe, with meal of the corn or oats. Cob and corn meal is improved by scalding, still more, for hogs, by boiling, with potatoes, apples and pumpkins, and yet more by partial fermentation. All these preparations facilitate digestion. An animal high fed with raw grain, whether horse, hog or ox, voids much of its food in an undigested state, which is, of course, lost for all beneficial purposes. Grinding grain for animal food, therefore, is universally admitted to be economical, and cooking and partially fermenting it, it is no less true, further enhances its value for swine. Even the water in which it is cooked augments its nutritious properties, in consequence, probably, of some chemical change effected by the boiling operation. Fish subsist in pure water, as is strikingly illustrated in the management of the gold fish. The experiments of the Rev. H. Coleman, in fattening swine, further warrant this operation. 'At first,' says this nice observer, 'we employed half a bushel of Indian meal to make a kettle full of hasty-pudding; but we soon found that a peck of meal, by taking up all the water it could be made to absorb, in a thorough boiling, would make the same kettle full (holding five pails) of sufficient consistency.' In giving cob meal to horses and neat cattle, that are fed with cut hay or straw, there is a double advantage, at least so it is stated by those who are well experienced in feeding the grain and hay together. The grain, especially corn, is sometimes too heating to horses, and this tendency is counteracted by the stimulus of distensions, afforded by the hay and straw. Mixed feed of this sort may be fed thrice in twenty-four hours. It is eaten in so short a time as to afford much beneficial rest to the animal."

The observation, in this series of useful knowledge, on the rest given to the animal's digestive labors, by this mode of feeding, is of much importance. Cuthbert W. Johnson, one of the highest authorities in all agricultural subjects, says: 'Food should be so prepared, that its nutritive properties may be all made available to the use of the animal; and, not only so, but appropriated with the least possible expenditure of muscular energy. * * * All food should be given in such a state to fattening animals, that as little time as possible, on the part of the animal, shall be required in eating,' and he should have added, and in digesting.

The facts above cited show conclusively the great value of crushed food for stock. We know farmers in Jefferson county, who are so well satisfied of the value of ground food for cows, that they send twenty and sometimes forty miles to get corn ground into meal for them, and, although they lose the value of the cob, they think themselves remunerated for their labor and loss of time.

Among the various machines brought before the agricultural public for the purposes we have named, we have seen but one of remarkable utility. It is a crushing mill invented by Jas. Rowe, of Tenn., and there is one now in operation on the farm of Jas. W. Graham, of Jefferson county. For simplicity, durability and genera' excellence, we have met with no competitor for it. We saw it grind into fine meal, six bushels of unshucked corn in fifteen minutes, and we have no doubt that it will easily grind fifteen bushels an hour, and give the horses several breathing spells in that time. Sheaf oats, with corn, are rapidly converted into a fine meal by it, and the oil cake, so valuable to all fattening animals, is ground by it into a fine meal and intimately mixed with the other food. This alone is a convenience of great moment, but to be estimated properly only by those who have used the oil cake in the common way, and who consequently know the difficulties attendant on its use. No man should undertake the fattening of cattle without the oil meal, if he can procure it.

There is another convenience in this crusher scarcely less important, if any, than those we have named. It makes not only what Mr. Rowe calls, in his circular, a fair article of meal, but, Mr. Graham assures us, a superior meal to any he has been able to get at the good mills in his neighborhood. The great inconvenience under which many wealthy farmers labor in getting corn ground into meal, makes this property of Rowe's crusher very valuable. We know of farmers who sometimes travel for their meal sixty miles, and we know of one in the county who travelled, from mill to mill, to get his corn ground, until he went one hundred and ten miles.

In commending this machine to the favorable notice of our agricultural friends, we do not rely alone on our own knowledge of its performances, though we know it does all we have said of its work. The two brothers of the Hon. E. H. Foster, United States Senator from Tennessee, have used these crushers several years. G. W. Foster says he considers "the machine a great acquisition, as regards convenience and economy in preparing food for man and beast. Its great recommendations are strength, durability and simplicity. The simplest negro above idiocy can attend to it. The mill being of *chill cast iron*, will last an age; it will not cost five dollars a year to keep it in order."

Benj. F. Foster says: "He has never sent for meal to any mill since he has had this crusher. It makes not only good meal, but also large and fine hominy. No mill could supply a family with better bread stuffs. The crushed shuck, cob and corn is the best food for cattle, sheep, &c., without any preparation, but the meal should be moistened with water for working horses. Thinks the *shucked corn*, crushed, best for hogs."

Isaac Franklin has four of these mills in operation—one in Tennessee and three in Louisiana; and has ordered another in the latter State. He says: "It is the very best mill for the farmer and planter that has been introduced. The most stupid negro can manage them and cannot put them out of order. The food prepared by the crusher from unshucked corn is the best for oxen, mules and horses ever tried. The saving is considerable."

Dr. John L. Hadley, of Nashville, speaks in the same terms of the machine, of the corn meal, and of the crushed provender for animals. He has been using one of these machines for two years.

Mr. Hough, the mail contractor between here and Nashville, says, "he has had one in use two years almost constantly, and feeds his stock and large stable of stage horses nearly altogether with the crushed food, and is much pleased with the food thus prepared. No mill can surpass this for stock purposes. The meal is excellent. He believes one of these mills will run fifty years and not cost ten dollars."

Hynes & Craighead say, "They use on their plantation in Iberville parish, La., about one hundred mules and horses, and twenty or thirty oxen, which are almost in constant use. They find that their work stock are much healthier, and are capable of performing more service since they have used the crushed food. Without having made an exact estimate, they confidently believe they save from six to eight hundred dollars annually in the quantity of food used; and in the life of the stock. They formerly lost from six to eight horses and mules annually, but since using the crushed food they have not lost half that number."

From the South Carolina Temperance Advocate.

CORN.

There is no subject in agriculture that is more particularly interesting to us than the cultivation of Indian corn. In the first place it is the national crop; in the second, it bears with it a spice of romance, as being intimately connected with that race upon whom only the sacred hand of antiquity has yet impressed the stamp of poetry in this new world; but, thirdly and chiefly, because it is believed to be the most valuable vegetable growth, take it all in all, cultivated by the hand of man. I do not believe either that our savage predecessors, or our tobacco making ancestors, ever brought the cultivation of this noble vegetable to perfection. I am very sure that the system of neither the one nor the other was of the charrcter best adapted to the present state of our soil. Neglected, as to a certain extent this valuable crop now is, still, in point of profit, it need not shrink from a comparison with either of its haughty rivals, wheat or tobacco. Facts and experience, which settle the claims of high and low, will prove the corn growing to be as independent and prosperous as any other interest in the state. But it is my settled conviction, that a thorough examination into its nature and character, would induce an improvement in its cultivation, that would place this vegetable of indigenous growth upon a much more elevated position than it even now occupies. It is very true that thousands of intelligent farmers have been for hundreds of years cultivating this simple crop, and it would seem wonderful that there should be any thing yet to learn about it; but that no fixed principles have been as yet established, is vouched by the fact that there are still as many opinions about the simplest points in its management as there are different cultivators. That this variety of opinion exists, arises, I believe, from the fact, that until the late establishment of agricultural papers, men ploughed, sowed, and reaped, without thinking at all; at any rate, without receiving from each other, the advantages of their mutual observations. Until within the last 10 or 12 years, the darkness of the middle ages covered the agricultural history of America. Indeed, it was not until our exhausted soils forced us to bring mind to the assistance of matter, that our farmers began to think at all, and it was not until the general establishment of a medium of communication, that any thing but the wildest guesses, founded upon the loosest facts, occupied the cultivators of the earth. Mortifying as this picture of ignorance may be to many of your older readers, it is nevertheless true, and when they reflect, how they themselves were in former days immersed, soul and body, in *politics*, they will be forced to concede that the science of agriculture found little space in the minds of their contemporaries.

But, thanks to the good sense of our deep thinking, practical people, as the stern necessity of an exhausted soil demanded a different course of conduct, they have lately begun to investigate the secrets of the great business in which they are employed, and hence it is, tha though we have been cultivating corn for hundreds of years, we are now just upon the threshhold of discovery with respect to its nature and character.

These remarks, which, I hope, if not very flattering, will not prove very tedious, have been elicited by reading an excellent essay on the subject, in the "Southern Agriculturist," from the pen of Dr. L. R. Sams, of South Carolina.

Dr. Sams, as the result of several investigations upon the roots of corn, found them to consist chiefly of perpendicular roots, from which numerous smaller ones proceeded horizontally. The depth, number and proportion of the perpendicular roots, the Doctor found to depend very much upon the nature of the soil in which they grew. In a very light, sandy soil, incumbent on a loose subsoil, he found an average of twenty-five perpendicular roots, from three and a half to four feet long. The size and extent of the lateral roots he found to be dependent upon the moisture of the surface soils. In a poor soil, of a dry season, they did not exceed two or three inches in length, while many were much shorter; on the other hand, in a rich moist soil, these lateral roots were very much increased, not only in numbers, but in all their dimensions, a large proportion of them extending from one to two feet or more from the stalk.

On a close, heavy soil, based on a stiff subsoil, the perpendicular roots were found more numerous, but shorter, reaching an average depth of only two feet. The horizontal roots, though of smaller diameter than the perpendicular, were so much more developed than in the former case, especially when favored by a moist and mellow soil, as to traverse and occupy the entire intervals (a space of five feet) between the rows.

The practical deductions that Dr. Sams draws from these facts, are, that if the soil is made rich and mellow to a considerable depth, the perpendicular roots will naturally penetrate to that depth, and as he found that the extension of the said roots along the surface was chiefly a substitute of nature for the obstruction of the perpendicular roots, he concludes, that whenever free passage is afforded the latter through rich ground, that this plant will be furnished by these means with food and moisture, even during a drought; when the lateral or surface roots that would otherwise supply their place, would be entirely parched and killed. Again, where a free descent is afforded through a mellow soil, the roots will be found almost wholly within a circle of two feet, of which the stalk is the centre; consequently, present economy would recommend the application of manure within that space. On the contrary, where, from the nature of the subsoil, the support is derived from the horizontal roots, the application of manure in the hill would fail to furnish the roots that had extended beyond its influence with their food at the most critical period of the plant, viz: the filling of the ear. Firing, Dr. Sams considers as nothing more than a failure of a supply of food and moisture to this most succulent and sappy of the vegetable tribe; and close planting leads to this fatal consequence, only because, in our usual mode of cultivation, the plant is dependent for a supply of food and moisture on its lateral roots, which can only find a sufficient supply for one stalk within a given space.

One thing is certain, that very large crops can only be obtained by close planting, and it is a great desideratum to know how that can be effected without the danger of firing that usually attends in this region.

It is only by a strict examination into facts with all their attendant circumstances, such as the world is indebted to Sams for, that any correct or philosophical conclusion can be arrived at. He may possibly have erred in the inferences he has drawn, but the agricultural community are at least indebted to him for the communication of the interesting facts he observed.

Yours, with the best wishes for the success of your useful and practical paper.

A Corn Grower.

PLANTING OF PEACH STONES

The annexed extracts are from a letter in the Massachusetts Ploughman, from Mr. J. Bartlett, of Quincy, Illinois:

"I should plant the stones not more than six inches apart, and transplant them when two or three inches high with a trowel, taking care to cut off the tap root two or three inches under the ground. By this means, you will be sure to have good roots and luxuriant growth; your trees will be large enough to bud the first season if your soil be suitable. If a person can obtain stones from a tree that is naturally of good quality, it is better to plant such and not depend upon budding; your trees will be much more durable raised from the stone, than those that are budded or inoculated. Many people have expressed a doubt as it regards the certainty of procuring the same kind of peach from the tree raised from the stone as the parent tree produced, even when the parent tree was natural. I think there is no doubt of the fact that a peach stone from a natural tree will produce the same fruit as the parent tree. I feel as sure of the result, as I should were I to plant a yellow kernel of corn of raising yellow.

"But no reliance can be placed upon the produce of budded trees; the seed does not inherit the qualities of the bud, but of the original stock or root, and consequently you cannot know what your fruit will be until the tree produces fruit, and then it will be too late to bud with good success. In some instances, I have had good success with budding trees four or five years old, but they are very apt to throw out gum where the incision is made in the bark, and that kills the bud or prevents it from adhering to the wood."

CORNSTALK SUGAR.

The following is an extract from the report of the committee on maple and cornstalk sugar, at the New York State Agricultural Fair in 1843:

"The committee have great pleasure in stating that Mr. M. Adams, of Ogden, in Monroe county, has gone into the experiment of manufacturing sugar of cornstalks; and for one acre of the 'eight-rowed yellow northern corn,' he has constructed an iron mill for crushing the stalk and expressing the juice, which answers the purpose admirably."

"Mr. Adams has, however, already made about four hundred weight of sugar, a sample of which he has submitted to your committee, and which, though not yet clarified, appears to be of a fair quality, capable of equalling the best of sugar made from the cane. The stalks still on the ground, he thinks, will make four hundred weight more sugar; but had it not been for the excessive drought which has prevailed in that section of the country, he is satisfied that the acre planted and experimented upon by him would have produced one thousand weight of sugar, which was the rate yielded by two rods of the land, which he measured off, the proceeds of which he worked up by itself."

From the American Farmer.

RESTORATION OF WORN-OUT LANDS.

Some time since, we published an account of the astonishing improvement of Dr. Noble, of Philadelphia, on a worn-out farm of his in Delaware, which he had bought at $15 per acre, and so fertilized in a short period as to produce upwards of 47 bushels of wheat per acre. In inserting that account, we expressed the hope that the Dr. would favor the public with a particular account of the *modus operandi* pursued by him, in order that the Agricultural public might be benefitted. Some friend of the Dr. has answered our inquiries in the annexed article, from the Farmer's Cabinet, but we regret that he had not been more particular:

Worn-out Lands.—In the American Farmer, of December 27th, appeared an extract from a communication by John Jones, of Wheatland, to the Farmers' Cabinet, in which he makes allusion to the astonishing effects brought about in the renovation of worn-out lands in Delaware, by Dr. Noble, of Philadelphia. On land which cost but $15 per acre, and produced but five bushels of wheat three years ago, by the application of eight loads of manure, costing—freight included—less than $1,50 per load, the Doctor has raised forty-seven bushels of wheat from 1 acre, and from the remainder rather less, the average being an enormous increase over the produce of former years. The editor of the American Farmer expresses an "intense desire" to learn the secret by which the Doctor has been enabled, at the small expense of less than $12 per acre, to effect such astonishing results.

We would inform him, there is no secret whatever in the method pursued, but such as any farmer might discover for himself, if he would but take the trouble to read some of the numerous works upon the application of Chemistry to Agriculture, lately published. Knowing, by chemical analysis or examination, the composition of the grain and straw of wheat, and that of the soil, it was an easy matter to apply those materials which were needed, in order to produce a healthy and vigorous growth. He prescribed for his wheat and soil as he would for a patient, and with equal success; health and strength have been restored to the suffering subject.

Now, as to the sources of the manure which he has made use of, we will say a word; it is in the power of every farmer, near large cities, to procure the materials which are needed to enrich the soil.

The Doctor formed a compost obtained from various sources, consisting of the refuse of tanners', soap boiling establishments, &c., in short, of such animal and vegetable substances as contain soluble salts, or which can be made subservient to the growth of plants. In the selection of these substances, he was guided by their composition as made known by chemical analysis. "Give," says the rational agriculturist, "to one plant such substances as are necessary for its developement, but spare those which are not requisite for the production of other plants which require them."

"An emphatical," or quack system "of agriculture, has administered the same kind of manures to all plants, or where a selection has been made, it has not been based upon a knowledge of their peculiar composition." The phosphate of soda or lime, the silicate of potash, and sulphate of ammonia, or other salts containing these in other combinations, are necessary for the production of wheat; these have been supplied by the Doctor, and why should we be astonished at the results which have followed their application? He has adopted the scientific method of manuring, and if his knowledge of the composition of the soil and wants of the crop was exact, and his conclusions correctly drawn, he could not err in the application of his manures. His is indeed a triumph of science over the old-fashioned, uncertain, and empirical mode of farming; here is an example worthy the attention of every farmer, and especially should it be considered by those whom prejudice has so blinded that they cannot perceive the vast benefits arising from the judicious application of scientific knowledge to agriculture. It is indeed "creditable to the Doctor as a scientific farmer," we hail him as a benefactor, and desire that he may persevere in that path of usefulness in which he has found both pleasure and profit. J. L. S.

Philadelphia, Second month 6th, 1844.

From the Southern Planter.

SALT—AN INJURY TO STOCK.

In conversation with a very practical farmer, who has been successful in raising stock, (I refer to Dr. Venable of Mecklenburg,—I know he will excuse the liberty of giving him as authority, for what follows,) I was a little surprised to hear from him, that if he was requested to give a recipe for the most effectual method of gradually destroying a good flock of sheep, he would say—"*Salt them freely from the 1st of November or December to the 1st of April.*" He thinks also, that it is very injurious to cattle, to salt them during the winter months. His reason for this opinion is, that the use of salt creates an unnatural thirst, and the introduction of cold water into the stomach of the animal, (especially of sheep,) is followed by many of the "ills that brutes are heir to." I am very sure, Mr. Editor, that the Doctor is very willing, and would desire to hear any objections and reasons in opposition to his theory, and I hope you, or some of your correspondents, will give their "notions" on this subject. The theory is supported, (the Doctor tells me,) by facts—a very satisfactory mode of argument. Those of his neighbors who have made free use of salt in winter have lost their sheep and cattle: he and others of his neighbors have been very successful in rearing them.

The Doctor, however, advocates the free and frequent use of salt for cattle, from 1st April to 1st November. He gives it three times a week. He does not give the salt alone. He makes use of the following recipe, viz:

Mix 4 bushels of clay, 2 bushels of salt, 2 lbs. of sulphur, and 2 lbs. of saltpetre: he gives the mixture in ample quantities, and sometimes makes up the mixture in cakes, and puts it about his gullies and galls—thus inviting the cattle to frequent such spots and enrich the soil (on which he has scattered herdsgrass seed) by their "deposites." Junior.

December 6, 1843.

We have frequently noticed objections, in the northern papers, to curing hay with salt, on account of its injurious effects upon the animals to which it was fed, arising from the unnatural excess of salt with which they were thereby drugged. But we had imagined that if a plentiful supply of salt were placed at the disposal of the animal, instinct would direct him as to the quantity required for his system.

Age of the Sheep.—The age of sheep may be known by examining the front teeth. They are eight in number, and appear, during the first year, all of a size. In the second year, the two middle ones fall out, and their place is supplied by two new teeth, which are easily distinguished by being of a much larger size. In the third year, two other small teeth, one from each side, drop out and are replaced by two large ones: so that there are now four large teeth in the middle, and two pointed ones on each side. In the fourth year, the large teeth are six in number, and only two small ones remain, one at each end of the range. In the fifth year, the remaining small teeth are lost, and the whole front teeth are large. In the sixth year, the whole begin to be worn; and in the seventh, and sometimes sooner, some fall out or are broken.

Warts on Cows' Teats.—Mr. Jonathan Perry, of Dover, tells us that lamp oil will kill warts on cows—apply it several days in succession. If other farmers find this effectual, they will oblige by sending additional testimony.

Mass. Plough.

From the Practical Farmer.

AGRICULTURE AS A SCIENCE.

All knowledge is founded on experience: in the infancy of any art, experience is confined, and knowledge is limited, to a few particulars; but as arts are improved and extended, a great number of facts become known, and the generalization of these, or the arrangement of them, according to some leading principles, constitute the theory laws, or science of an art.

Agriculture, in common with other arts, may be practiced without any knowledge of its theory; that is, established practices may be imitated; but in this case it must remain stationary. The mere routine practitioner cannot advance beyond the limits of his own particular experience, and neither derive instruction from such accidents as are favorable to his object, nor guard against a recurrence of such as are unfavorable. He can have no resource for unseen events but ordinary expedients, while the man of science resorts to general principles— refers events to their true causes, and adopts his measures to meet every case.

The object of the art of agriculture is to increase the quantity and improve the quality of such animal and vegetable productions of the earth as are used by civilized man, and the object of the agriculturist is to do this with the least expenditure of means—in other words, profit. The result of the experience of mankind as to other objects, may be conveyed to an inquiring mind in two ways: he may be instructed in the practical operation of the arts, and their theory, or the reasons on which they are founded, laid down and explained to him as he goes along; or he may first be instructed in general principles, and then in the practices which flow from them.

The former mode is the natural and actual mode in which every art is acquired by such as have no recourse to books, and may be compared to the natural mode of acquiring a language without a knowledge of its grammar. The latter mode is by much the more correct and effectual, and is calculated to enable an instructed agriculturist to proceed with the same kind of confidence and satisfaction in his practice, that a grammarian does in the use of language.

GRAFTING GRAPE VINES.

The late Mr. N. Herbement, of South Carolina, a successful cultivator of grape vines, after referring to the usual modes of grafting fruit trees, says:

"But let vines be grafted in this manner, unless the operator knows the particular requisite for the vine, and the probability is that he will scarcely succeed once in five hundred trials. The mode of grafting, which I practice usually, and which is attended with no difficulty, and very seldom fails, is as follows:—All I do, is to take away the earth round the vine, to the depth of four or five inches; saw it off about two or three inches below the surface of the ground; split it with a knife or chisel; and having tapered the lower end of the scion in the shape of a wedge, insert it in the cleft stock so as to make the bark of both coincide, (which is perhaps not necessary with the vine;) tie it with any kind of string, merely to keep the scion in its place; return the earth to its place, so as to leave only one bud of the graft above the ground, and the other just below the surface, and it is done."

TO YOUNG MEN—TRUTH WELL SPOKEN.

We commend the following well-timed remarks of the editor of the New-York Tribune, to the special attention of those young men in the country who feel inclined to murmur at their lot, and to envy young men in cities their imaginary advantages.—*Gen. Farmer.*

It is a sore evil that labor, so essential to health, vigor, and virtue, is generally regarded with aversion. Even those who boast that they live by straight-forward hard work, are almost uniformly seeking to escape from their condition,

Even the substantial, thrifty farmer, whose life is, or might be, among the happiest, is apt to train his darling son for a profession or put him in a store. He laudably wishes to put him forward in the world, but he does not think that half the time and expense bestowed in making him an average lawyer, or doctor, would suffice to make him an eminently intelligent and scientific farmer—a model and blessing to the whole country. Why will not our thrifty farmers think of this? The world is surfeited with middling lawyers and doctors—the gorge even of Iowa rises at the prospect of a new batch of either; of tolerable clergyman there is certainly no lack, as the multitudes without societies bear witness, and yet here is the oldest, the most essential and noblest of employments, on which the full blaze of science has hardly yet poured, and which is to-day making more rapid strides, and affords a more prominent field for intellectual power than any other, comparatively shunned and neglected. Of good, thoroughly educated, at once scientific and practical farmers, there is nowhere a super-abundance. Every where there is need of this class, to introduce new processes and improve old ones, to naturalize and bring to perfection the plants, grains, fruits, &c. we still import from abroad when we might better produce them at home—to introduce a proper rotation and diversification of crops—to prove and teach how to produce profitably the most grain to the acre—in short, to make agriculture the pleasing, attractive, ennobling pursuit it was originally intended to be. There is no broader field of usefulness—no surer road to honorable eminence. The time will come when, of the men of the last generation, Arthur Young will be more widely honored than Napoleon. But while the true farmer should be the most thoroughly educated and well informed men in the country, there are many of our old farmers even, who will cheerfully spend a thousand dollars to qualify one son for a profession, yet grudge a hundred each to educate the three or four less favored who are to be farmers. There are farmers who cultivate hundreds of acres and never look into a book on agriculture, though they would not countenance a doctor or clergyman who studied no works on medicine or theology. What a world of mistakes and inconsistencies is displayed all around us!

There are thousands in all our cities who are well employed and in good circumstances; we say, let these continue, if they are content, and feel certain that the world is better in their daily doings. There are other tens of thousands who *must* stay here, as things are; having no means to get elsewhere, no skill in any arts but those peculiar to city life, and a very limited knowledge; these must stay, unless something should transpire out of the common course of events. There are other tens of thousands annually arriving from Europe, who, however valuable acquisitions to the country, must contribute to glut the market and depress the price of labor of all kinds in our city—some of these must remain here till they can obtain means and knowledge to go elsewhere. But for young men of our own happier agricultural districts to crowd into the great cities or into villages, in search of clerkships and that like, is madness—inhumanity to the destitute—moral suicide. While nine-tenths of the States are a waste wilderness, and all our marts of trade overflow with eager seekers for employment, let all escape from cities who can, and all who have opportunities to labor and live in the country, resolve to stay there.

From the Tennessee Agriculturist.

TO YOUNG LADIES.

Having formerly addressed young ladies on gardening, &c., I take the liberty of presenting them another subject, in which I feel a deeper interest, and which is to them of far more importance. The Christian Religion is my theme now, and I am particularly anxious to engage the young in the study of this noble science. I call it a science, because it can be learned only by study.

It is not something we can pick up in this place or that—it will not come in a still small voice, or run over us like a shock of electricity, paralysing the faculties and rendering us incapable of sensible thought or action. No, as I said before, it is a noble and beautiful science, to attain a correct knowledge of which, requires the exercise of the best powers of the soul—the most earnest desires of the heart. I speak to the young, because it is in the morning of life we should commence the acquisition of this knowledge, should lay up the rich stores which will make us wise unto salvation.

I know the lightness, the gaiety, peculiar to youth, causes the Christian Religion to be regarded as something dull and gloomy—something that is calculated to lessen its happiness; but let me tell you, that it forbids nothing that is not ultimately injurious. Does it forbid the amusements in which the thoughtless votaries of pleasure engage with so much eagerness, and which often cause their ruin, temporal and eternal? If it does, it is because they are hurtful. They may give a transient glow of pleasure for the present, but leave a sting behind. I have seen the young, the gay and the beautiful, die, without hope and without God in the world, and have heard them lament, with their last breath, that their parents had not restrained them in their gay career—had not taught them to live for *eternity* as well as for time.

Had they, in early life, been taught to regulate their lives and conduct by the Christian Religion, how much anguish would have been spared them in that last sad hour, when death feels about the heart with his icy fingers, blasting the bright hopes and stopping the warm pulse of life.

The Religion of Christ is the preservative principle. It is the salt of the earth. Without it, the character of woman, old or young, is defective. When well understood and practiced, it gives a dignity and propriety of conduct, a softness and gentleness of disposition, that renders youth most engaging, most lovely. A woman, who is uninfluenced by the pure principles of the Gospel, is a branch from which emanates no verdure, for the principle of life is wanting. I have seen some who would even sneer at the sacred volume—at the world's best friend, the only hope of man. If you have ever spoken lightly of, or treated with scorn, the Gospel of the Saviour, let me persuade you, for your own sake, from the consideration that the Christian Religion has done so much for woman, to refrain from what appears so odious. Willis, speaking on this subject, makes some beautiful and suitable remarks:

> "Oh, what is woman, what her smile,
> Her lip of love, her eye of light—
> What is she, if she still revile
> The lowly Jesus? Love may write
> His name upon her marble brow,
> And linger in her curls of jet:
> The young spring flowers may scarcely bow
> Beneath her step—and yet and yet,
> She is, she is, and still must be,
> A lighter thing than vanity.

I have to leave off at present; but, nothing preventing, I wish to speak to you of the importance of becoming christians early, that you may be educated, that you may be trained for the society of Heaven. You know that here we have to be trained for good society before we can enjoy it. So it is with regard to the future life. Were we placed among the pure spirits of the Holy Land, we would be miserable, unless previously prepared to participate in their enjoyments. At some future time, I will speak to you of this important preparation. LUCY.

CURE FOR THE BLOODY MURRAIN.—A subscriber called on us a few days since, to say that cattle may be cured of this disease, by giving a table spoonful of Mandrake root pulverised, to each animal. This, he says, will almost always effect a cure, but may be repeated in half the quantity after an hour, if the first does not answer.

N. Y. Central Farmer.

From the Boston Cultivator.

COWS HOLDING UP THEIR MILK.

A farmer observes that he was troubled with a cow holding up her milk, and he could devise no means to remedy the evil; when his son, only 9 years old, took the management of the cow, in this respect, and succeeded well. This son was afterwards at his uncle's, who had the same trouble, and feared that he should lose his cow, as she had not given down any milk for several days; the boy said that he could milk her. He went to work performing the operation precisely as though the cow gave down her milk, though for some time she gave none; he still persevered, and after some time the milk flowed freely, and he obtained nearly two pails full.

This shows that mildness and steady perseverance is necessary in this business. Some persons become fretful if they cannot succeed in milking at once, and then abuse the cow for her obstinacy, instead of persevering, and succeeding as they might in many cases. It is doubtless most natural and easy for a cow to give down her milk, and when she holds it up she puts herself under a restraint, and this requires a constant exertion, of which she will become tired after a while, if the milker perseveres. These are our views, and we advise those who are so unfortunate as to have a case of this kind, to try the effect of perseverance, if necessary.

PEACH STONES.

A writer in the Massachusetts Ploughman, says:

"Deposit the stones, after being taken from the peach, in sand or dirt; put them in the ground, slightly covered, in the fall. As for the cotton-bag in which to keep them under ground, I have never tried it, or any other covering but the ground itself. Take up the stones early in the spring, crack them and plant immediately the meats or pits. In a week or ten days, they will all be up, without fail, just as certain as so many peas, or kernels of corn."

Another writer in the same paper thus states his practice:

"My manner of propagating from the stone, is to gather the stones soon after the peach harvest, before they become extremely dry, and scatter them upon the surface of the ground in my garden, there to remain until the garden is plowed the next spring; when, in the course of a few weeks, or nearly as soon as other vegetation comes, they will be seen coming up pretty abundantly. These I transplant soon after they spring up, to some convenient place of cultivation, where they remain one or two years, just as purchasers prefer."

This writer states that he has planted, for many generations, the seed of two varieties of the peach, and that he was not able to perceive the slightest variation from the original fruit. The two varieties were planted together.

From the Boston Cultivator.

BEES.

Bee hives should be shaded until the snow is off, and the weather so warm that the bees can go out without injury from the cold. When the sun shines on a hive, it produces a heat that invites the bees out, when it is so cold that they become chilled, and fall upon the snow or cold ground, and cannot recover. In this way thousands are lost. We should as soon think of allowing calves, lambs, chickens, ducks, &c., to go out and perish in cold storms, as to allow the destruction of bees for want of care. When the hives are in the shade, and it is rather dark around them, the bees will not be invited out till it is so warm that they can generally return in safety. Besides the great evil we have named, the bees on going out discharge the contents of their stomachs, as may be seen around the hive, and which they never do in the hive; consequently they must fill them again, and thus cause a needless consumption of food.

From the Southern Planter.

IMPROVEMENT OF THE SOIL AND OF THE MIND.

The late excellent Judge Buel, has left us much information upon the "improvement of the soil and of the mind." If I forget not, he generally had an essay on the improvement of the mind, for the benefit of the rising generation, both male and female. It is evident to every observing man, that the improvement of the soil and the mind must go together. Their influence acts reciprocally on each other. The wisest of men, Solomon, says, "I went by the field of the slothful, and by the vineyard of the man *void of understanding;* and lo, it was all grown over with thorns, and nettles had covered the face thereof, and the stone wall thereof was broken down. Then I saw, and considered it well; I looked upon it and received instruction. Yet a little sleep, a little slumber, a little folding of the hands to sleep: so shall thy poverty come as one that travaileth; and thy want as an armed man," (a sentinel, I suppose, who dare not leave his post until relieved.) See Book of Proverbs, xxiv. 30-34.

Again he says, "Seest thou a man diligent in his business? He shall stand before kings; he shall not stand before mean men."

All nature is progressive, and man, the lord of this lower world, by Divine appointment, is commanded to grow in favor and knowledge of his Lord and Saviour, Jesus Christ This is done, by the works of creation, and revelation, understood and obeyed. The Author of all nature has given a constitution for the physical universe, for his creature man, and for Christ's Church. These are as immutable as his throne, and admit of no improvement or amendments. Progressiveness is an essential attribute of all beings except the Deity—its absence implies either a state of absolute perfection, or an insusceptibility to any improvement. The first state is applicable to the Divine Being alone, and the second applies not to man, physically, politically, intellectually, or religiously, considered. Progressive improvement—constant, uninterrupted and perpetual, entered into the design of God, in the formation of all organized bodies, whether animate or inanimate, physical or mental. The vegetable, animal, and intellectual world, when uninterrupted by the perversions of art, afford constant, sensible demonstrations of the universality of this principle. The infant plant, in its regular and rapid advances to a state of maturity—the infant man passing gradually and regularly from the cradle upwards, through the gradations of boyhood, and manhood, to maturity of stature and texture; the infant mind, which is first limited in its capacities to the direct objects of sense, but soon acquires the art of reasoning and reflection, and continues to advance to the stature of a powerful genius, all tend to demonstrate this undeniable truth. The arts, sciences, politics, and religion, have had their infancy, and the various stages of their progress and improvement make up their whole history.

How incompatible with the design of God, are those authoritative and proscriptive creeds, political and religious, which trammel the human mind, and set those narrow bounds to investigation and research! What would be the result, should some misguided cultivator attempt to set physical bounds to his stalks of corn, before they arrive to maturity? or should some capricious or fanciful parent invent some physical contrivance to prevent the further development of his son's physical system, and apply it at the age of ten years, what would be the result? Equally absurd is it to collect the agricultural, political, or religious sentiments of any man or set of men of any age, and out of them constitute a proscriptive creed for the prevention of all further advances of light and truth: such a course would be disastrous to the peace and prosperity of society—and has been the cause of much political and religious faction, and is now rending and tearing the world to pieces. This is the fruit of bigotry and intolerance, produced by the demon of party spirit.

Demosthenes, when asked the first requisite to eloquence, replied, "action,"—when asked the second, he replied, "action,"—and the third, he still replied, "action." Industry bears the same relation to agriculture that action did to eloquence, in the estimation of the Athenian orator. With industry, the farmer may accomplish every thing—and without it, he can do nothing. Let him study the value of time. Time is his great capital, and should be well invested. The wealth of the world, its high civilization, and its magnificent improvements, have been created and finished by the labor and industry of man. The poorest soil and most unfavorable climate are scarce impediments to an industrious and energetic people. Look at Holland, reclaimed from the ocean, fenced in by her embankments and mud walls, literally a smiling garden, where once there were nothing but bogs and ocean's wave. Look at Switzerland, where an industrious and hardy people, contending against the avalanches of snow and ice, and the embankment of mountain masses of rocks, falling and crushing for miles square every thing before them, have cut the hills and mountains in terraces, and planted them with vines; according to the account of travellers, lands which before were worse than nothing, by this improvement sell for ten thousand francs per acre.

If there is one who may eat his bread at peace with God and man, it is that individual who has brought that bread out of the earth by his own industry: it is cankered by no fraud, it is stained by no blood, it is wet by no tear, but the sweat of his own brow.

I will conclude by giving you the true test of fame. The truest seeker after fame is the man who labors to make his children useful and honorable in their generation. In this way, editions of his works may go on multiplying, instead of, perhaps, sinking into oblivion with his own time.

If acceptable, I may furnish extracts of interest to your readers occasionally, upon the various duties of this life.

King & Queen.

From the Southern Planter.

BEDS—COMFORTERS—MINCE-PIES.

Mr. Printer—I don't often spend a night from home, but last July I went to see a neighbor, richer than John and I. A rain kept me there all night. They put me to sleep in a room right well aired, but in a *feather-bed!* The night was very hot, and you may be sure I suffered.

Isn't it wonderful that people should know so little about comfort, as to sleep in feather beds in summer? In all the houses I go to, some richer and some poorer than ours, I see none but feather beds. Now, I have been sleeping, winter and summer, upon a mattrass made of corn shucks, with layers of wool, and upon my word, I would not give it up, and sleep on a feather bed, for fifty dollars a year. The feathers heat you too much in warm weather, and at all times, they let the body bend so in their mushy hollows, that it is filled with aches and cramps. Dr. Mason says, (and John calls him my oracle,) that in bilious fever neighborhoods, people who sleep on mattrasses like mine, or hair mattrasses either, or nice straw beds, are a great deal less apt to have the fever, than people who sleep in feather beds. He says the feathers relax the system, make the sweat excessive and irregular, and disorder the digestive organs.—(You see I've learnt some of the Doctor's hard words.)

John went to Middlesex last summer, and says they almost sweated him to death in their feather beds. They have a fever harvest there every September. Such a mattrass as mine, any woman can make, with a little help from her husband. I made mine. One can be bought for six or eight dollars. I hear that at the Exchange Hotel, and all the most fashionable houses, they sleep only upon mattrasses.

Now, about *comforters.* There are many Virginia people, quite well off in the world, who won't buy blankets, through "economy," as they call it. There are others who can't afford to buy them; some, through real poverty, and some because they can't spare the money from their grog-shop allowance Most of these people cover their beds with *quilts.* I would almost as lieve have a sheet of iron spread over me, as one of these quilts—it is so cold and heavy. There's a philosophy about this, as there is about ripe bread. *Quilting* the bats of cotton in the quilts, with such close rows of stitches, makes it solid and compact, so that it conducts away the heat of the body. For things close-grained, or compact, are *conductors* of heat—while things that are spongy, or open, like locks of wool or cotton, are *non*-conductors of heat. Now, I can tell these frugal people how they may have coverlets for their beds, a great deal warmer, and cheaper too, than bed-quilts.

Take three pounds of cotton, carded in bats, lay them smoothly and regularly over a sheet of cotton or cheap calico; spread over them another sheet, and stitch the two sheets together by long, easy stitches, in rows at least eight or ten inches apart. The stitching is only to keep the bats in place. Bind the edges with any thing you please. You will find such a comforter warmer than three blankets. And five pounds of cotton, carded into light, loose bats, will make it too warm to sleep under, except in the coldest weather.

All clothing warms us, not by any warmth of its own, but by confining to our bodies the heat that comes out of them. The bats being so loose and spongy, make the comforter a *non-conductor* of heat. So it confines the heat to our bodies, and keeps them warm. No blankets have been on our beds for ten years, and nobody sleeps cold in our house.

Mince-pies, it is thought, can't be made toothsome without wine or brandy in them. It is not so. No pies of mine have had a drop of any intoxicating liquor for three years, yet the best judges have said, and behind my back, too, that my mince-pies were equal to any they had ever tasted. Besides, Mr. Printer, I have the comfort of knowing, that in these three years, no reformed drunkard has ever *tasted relapse and ruin* at my table, though several have eaten of my pies, and that no child or servant of ours is ever seen coming from the liquor-shop with a jug or bottle—no liquor seller can say "the Dumplings are customers" of his.

This is my

RECEIPT FOR MINCE-PIES WITHOUT WINE OR SPIRITS.

Take 4 pounds of plums, 1 pound of currant, 2 of cherries, 3 of beef suet, 4 of sugar, a fresh beef's tongue, ½ a pound of citron, 1 ounce of mace, ½ an ounce of cloves, 1 nutmeg the juice of 2 lemons, vinegar to your taste. Make mince-meat of these materials, and put it by for use. When you make pies, add syrup, or juice, or stewed apples, to make the mince-meat liquid, and some fresh apples chopped fine.

In place of citron, marmalade or preserves will do. Dorothy Dumpling.

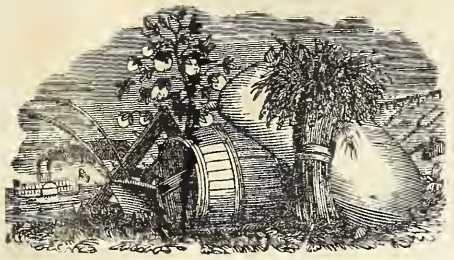
Louisa, January, 1844.

GREASE SPOTS.

A correspondent of the Southwestern Farmer, who signs "J. E. W." gives the following as a good recipe for taking grease spots out of clothing, &c.:

"Take the yolk of an egg, entirely free from the white, (be sure not to scald the egg,) and with a soft brush apply the mixture, and rub it on the spot until the grease appears removed or loose. Wash off the egg with moderately warm water, and finally rinse off the whole with clean cold water. Should not all the grease be removed, which may arise from being on a long time, or not sufficiently washed, dry and repeat the operation."

The writer of the above, says that a fine Merino shawl, which had been badly smeared with tar and grease, (gudgeon grease,) was perfectly cleaned by this process in a few minutes.



WEDNESDAY, APRIL 3, 1844.

THE BACK VOLUME.

All new subscribers who may desire it, can obtain the first volume, neatly bound in boards, at one dollar the volume.

An Apology.---The same cause which operated to delay the publication of our last number beyond its proper time, has operated upon the present. Now that our compositors have all recovered from the Measles, we hope to move on regularly, and to issue our paper on the regular day of publication.

CORRESPONDENTS—OURSELVES.

In the prosecution of our labors—in our efforts to present an Agricultural Journal acceptable to Southern planters, devoted, as it should be, to that system of agriculture best adapted to our soil, climate and productions—we had fondly hoped to have received the fostering aid of the planters generally, in the form of contributions, in which new theories should be presented, or old ones improved upon. In this, however, if we make a few honorable exceptions, we have been wholly disappointed. Why it is, we know not—indeed, we confess ourselves incompetent to render a plausible excuse for many of the warm friends of the work, who have never contributed a paragraph or a line to its pages. Why is this? Do they not feel the necessity of such contributions? It occurs to us that every reader of the paper must be struck with the almost entire absence, in our pages, of the contributions of practical men. We feel, and feel sensibly, this defect; and we know that our readers must also feel disappointed from the same cause. And yet, notwithstanding all our efforts and entreaties to our numerous friends, we have not been able to overcome their apparently positive reluctance to communicate whatever they deem of value to the great brotherhood of planters.

It is our purpose, therefore, in this article, to renew our oft repeated and urgent requests to the friends of our enterprise, to afford us some aid in this respect. We are peculiarly situated—being, with two exceptions, the only Agricultural organ in the cotton growing regions: we are necessarily, in the absence of original contributions, compelled to extract copiously from other journals, and not unfrequently matter not so well adapted as that which would, and could be afforded by our friends. Besides this, we have an additional claim upon their intellectual efforts; for they are interested to an equal, if not greater degree than ourselves, in the establishment of the most approved and enlightened system of culture: such a system results immediately in their benefit, and but indirectly for ours. It is therefore due to themselves, because of their deep interest in the subject, that they should contribute their mite to render the Cultivator not only interesting, but valuable to every reader. In proportion as it is fostered and sustained by the contributions of our own planters, in the same ratio will it increase the interest and attract the attention of discreet farmers, wherever it may be seen and read. And, in this way, it will be based upon a firm and immovable foundation, diffusing its benefits to a whole race of people, by introducing to them the results of practical operations in every department of their highly important vocation.

Does any man doubt that such will be the actual result of the publication of such a work, in the success of which a whole people are interested? Certainly not. Then, do we ask too much of our friends, when we ask them to contribute their several mites to the prosperity of the whole country, of which they are a citizen? Indeed, we but ask you to enrich yourselves, to put money into your own pockets. For, if we can but succeed in exciting sufficient interest on the subject, our paper will be well stored with matter adapted to the improvement of every department of agriculture. And, as a consequence, while one is enlightening his brethren in one branch, he will be receiving equal benefits from the suggestions of another in a different branch. Let us then hope that, for the future, we shall not again feel compelled to recur to this subject, but that, on the contrary, our friends will contribute liberally to our own, and to each other's wants.

Remedy for Botts, &c.—Our excellent friend, Gen. Grier, of Taliaferro county, has sent us the annexed recipes, which we commend to our readers. We have heretofore given that for Botts, but it is one which cannot be too often repeated, and we are gratified to have this additional testimony in support of its efficacy.

—

Raytown, Ga., April 2d, 1844.

Cure for the Grubs.—Make a strong decoction of sage tea, and drench in the usual way, will soon expel the grubs. Last summer, I had a mare that was very sick—she was up and down, rolling and tumbling; and, from the symptoms, I had just reasons to think it was the grubs—and, having heard that sage tea was a good remedy, I prepared a tea, and drenched once, and in a short time the mare was relieved. She did not lie down, and roll and tumble about, after the tea was given.

Another case.—A negro wagoner, on his way to Augusta, last fall, called at my house with a sick horse, and applied to me to do something for the horse. After looking at the horse, and inquiring of the boy about the symptoms, I was induced to believe it was the grubs, and directed the sage tea to be given, and the horse was quickly relieved. These two cases, which came under my own observation, succeeded so well under this simple mode of treatment, that it has induced me to make it more public.

I have just conversed with a stage contractor, who recommends sage leaves to be put in the troughs occasionally, as a preventive for the grubs.

—

To kill Lice on Horses and Cattle.—Make a strong sassafras tea, or red pepper tea, or a mixture of both is preferable, with a reasonable portion of lard, and rub or wash the animal with it every two or three days. It will kill the lice and destroy the nits as fast as they hatch; and, by a few washings, the animal will soon be rid of the lice: it is a sure and safe remedy.

—

To kill Lice on Hogs.—Cut up a few pods of red pepper in small pieces, and fry them in lard until they change their color, then mix it with tar and a small quantity of spirits of turpentine, and rub or smear it on the affected parts, and along the back and sides. It will effectually drive away the lice.

Death of Willis Gaylord.—The Albany Argus announces the death of Willis Gaylord, Esq., formerly one of the editors of the Genesee Farmer, and since the death of Judge Buel, senior editor of the "Cultivator." He died at his residence, Limerock Farm, on the 27th instant, after an illness of only thirty-three hours. He was a most estimable citizen, and one of the ablest agricultural writers in the United States.

VALUE OF AGRICULTURAL PAPERS.

The following extract of a letter, from Thos. Affleck, Esq., of Mississippi, is so pertinent on the subject of the value of Agricultural papers, that we cannot forego the pleasure of laying it before our readers, with the hope that it may excite among some of them a disposition to make trial of some of the various suggestions which are contained in our columns, and thereby test the truth of the value of Agricultural papers.

"I perceive that you do me the honor to republish some short articles of mine. Gladly would I do more towards exciting in my brother planters a desire to improve in their calling, were it in my power; but I find my leisure for writing much curtailed—and, moreover, doubt very much their willingness to be taught by as young a planter as myself. I doubt, too, my own capability of teaching; but, when I pick up, or acquire, by experiment, any thing that I consider to be an improvement, I am anxious to have others test it, and to save them the labor and time which I had to bestow in acquiring it. And this is the great advantage of Agricultural papers—that they form a record of such things, and a cheap and ready vehicle for disseminating information, which it has taken perhaps a lifetime to acquire. Here, for instance, is one item which may be before hundreds in a very short time, through the medium of your paper—a cure for a troublesome disease in the horse, *swinney* or *swayney*—which, otherwise, they might never know. *I have not tried the remedy*, but I had it from a practical man, who assured me that he had himself effected at least *eight* perfect cures by it. He takes a quantity of common red *earth-worms*, puts them over the fire in a pan, with just sufficient water to keep them from sticking to the pan or scorching, and allow them to simmer there until *they melt into an oil-like substance*, which is bottled up for use. Rubbing the shoulder with this oil two or three times a day, for a few days, will, he assures me, effect a perfect cure.

"Here is another simple affair which, had I known it this last spring, would have saved me a world of lost labor, *and of rail timber*. The only rail timber I have, on one plantation, is blue or yellow poplar, (Liriodendron Tulipefera,) enormously large trees, which I find great difficulty in opening. The stoutest hand, with a *maul* as heavy as he can handle, can make no impression on many of them—the maul bouncing from the wedge or glut, without *entering it* an hair's breadth. A weight or power, greater than one hand can manage or exert, is requisite to overcome the resistance. I was recently complaining, to an old gentleman, of the difficulty; and how much I regretted to see fine large timber trees scattered about, which I could not use; and which, in a growth of magnolia, holly, mulberry, &c., were of great value to me. He at once suggested a remedy, "which he had always practsied!" He takes a hickory, dogwood, or other hard wood stick, say six or eight feet long, and seven or eight inches through—squares one end of it for striking with, bores an inch and a half, or two inch augur hole, entirely through, within eighteen inches or two feet of each end; through these runs two pieces of a stout grape vine, so that the stick can be lifted by four hands, and swung as a *battering-ram*. With a very few blows of this effective *maul* on the glut, the largest log can be opened; and, when quartered, can be readily worked up into rails.

"Now here we have another of the advantages of Agricultural papers. I instance myself again. I felt satisfied, when I first settled in the South, that a ruinous practice was pursued in the culture of Cotton, and was exceedingly desirous of making a change. I had so many old planters tell me, both by their example and their precept, that the only way to make Cotton was to plow shallow, and put Cotton after Cotton on the same land for twenty years in succession; that manure would not pay for the trouble and labor necessary to apply it; and that if *I wanted the Cotton*, I must leave plenty of plants in the ground—that I almost feared to attempt any great change, and would have gone on experimenting in a small way for some years, had I not seen those excellent and able letters of Dr. N. B. Cloud, in the Albany Cultivator. These at once determined me to give greater distance to my Cotton, and last year I reaped the reward. Of the absolute necessity for manure, deep plowing, surface culture and a rotation of crops, in Cotton growing, as in every thing else, I needed nothing to convince me.

"You will observe that I have proposed a sweepstakes' crop of five acres—five dollars entry. Who of your readers will join us? It is open to all. Will Dr. Cloud? I should be highly gratified by his doing so."

From the Maine Cultivator.

COB MEAL.

Messrs. Editors:—I noticed some time since an article in your paper—editorial, I think—in which it was urged upon farmers to *grind their cobs*, as the meal was valuable for many purposes on the farm—particularly for poultry, hogs and stock.

On the strength of this suggestion, I "acted," and can now assure you, so well satisfied am I with the result, that my cobs will never, as heretofore, be "*uselessly thrown away*." As I grind my cobs with the corn, I cannot speak definitely as to the value of corn meal when used in its pure and unmixed state, but I am satisfied that here is a very important saving attained by economizing cobs in the manner you direct. I have, during the last three months, fed corn and cobs to my horses, cattle, hogs, and calves, and as I have a large stock this winter, and have, thus far fed them wholly on the products of my farm, the saving to me, from this simple suggestion, has, I assure you, been of no small value as regards the *purse*.

Yours, Economist.

Conundrum.—Why are many modern ladies like the lilies of the field?

Strange mode of curing a Vicious Horse.—I have seen vicious horses in Egypt cured of the habit of biting, by presenting to them, while in the act of doing so, a leg of mutton just taken from the fire: the pain which a horse feels in biting through the hot meat, causes it, after a few lessons, to abandon the vicious habit.

Burckhardt.

Remedy for Lice in Cattle.—Fine dry sand, when scattered on the back, neck and sides of animals, is an effectual remedy against these vermin. A friend of ours observes that he collects dry sand and puts it in a tub or box in the barn, and occasionally applies it during the winter, by sifting or strewing it over the body of the creature, with complete success in ridding it of its troublesome guest.

HYMN TO THE FLOWERS.

by horace smith.

Day-stars! that ope your eyes with man, to twinkle,
From rainbow galaxies of earth's creation,
And dew-drops on her lonely altars sprinkle,
As a libation—

Ye matin worshippers! who, bending lowly,
Before th' uprisen sun, God's lidless eye,
Throw from your chalices a swee and holy
Incense on high!

Ye bright Mosaics! tha: with storied beauty,
The floor of Nature's temple tesselate,
What num'rous emblems of instructive duty,
Your forms create!

'Neath clustered bowers, each floral bell that swinge th
And tolls its perfume on the passing air,
Makes Sabbath in the fields, and ever ringeth,
A call to prayer!

Not to the domes, where crumbling arch and column,
Attest the feebleness of mortal hand;
But to that fane, most catholic and solemn,
Which God hath plann'd—

To that cathedral. boundless as our wonder,
Whose quenchless lamps the sun and moon supply,
Its choir the wind and waves—its organ thunder,
Its dome the sky!

There, as in solitude and shade I wander,
Through the green aisles, or stretched upon the sod,
Awed by the silence, reverently ponder
The ways of God—

Your voiceless lips, O flowers, are living preachers,
Each cup a pulpit, every leaf a book,
Supplying to my fancy numerous teachers,
From loneliest nook.

Floral apostles! that in dewy splendor,
"Weep without woe, and blush without a crime,"
Oh! may I deeply learn, and ne'er surrender
Your lore sublime!

"Thou wert not, Solomon, in all thy glory,
Arrayed," the lilies cry, "in robes like ours;
How vain your grandeur! ah! how transitory
Are *human* flowers!"

In the sweet-scented pictures, Heavenly artist!
With which thou paintest Nature's wide-spread hall,
What a delightful lesson thou impartest,
Of love to all!

Not useless, are ye, flowers, though made for pleasure,
Blooming o'er field and wave, by day and night;
From every source your sanction bids me treasure
Harmless delight!

Ephemeral sages! what instructors hoary,
For such a world of thought could furnish scope?
Each fading calyx a *memento mori*,
Yet fount of hope!

Posthumous glories! angel-like collection,
Upraised from seed to bulb interred in earth,
Ye are to me a type of resurrection,
And second birth!

Were I, O God! in churchless lands remaining,
Far from all voice of teachers and divines,
My soul would find, in flowers of thy ordaining,
Priests, sermons, shrines!

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CONTENTS OF THIS NUMBER.

	PAGE.
Agricultural Machinery, improvement in	50
Agriculture as a Science,	52
Agricultural Papers,	55
Bees,	53
Botts, &c., remedy for	55
Bloody Murrain, cure for,	53
Beds, Comforters, Mince-pies,	54
Corn,	51
Communications,	49
Cows holding up their milk	53
Cow's Teats, warts on	52
Cornstalk Sugar,	51
Grease Spots	54
Gaylord Willis, death of	55
Grape Vines, grafting	52
Hymn to the Flowers,	56
Improvement of the soil and mind,	54
Peach Stones,	51
Peach Stones, planting of	53
Salt,	52
Sheep, age of the	52
Truth well spoken,	52
Worn-out Lands, restoration of	52
Young Ladies,	53

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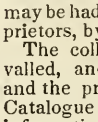

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Flushing, February 17, 1844. Proprietors.
mh 6

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SOUTHERN CULTIVATOR.

VOL. II. AUGUSTA, GA., APRIL 17, 1844. No. 8.

COMMUNICATIONS.

For the Southern Cultivator.

CULTURE AND PREPARATION OF INDIGO FOR MARKET.

On this subject, Mr. Editor, I believe no communication to the public has been made through your interesting and useful paper. The Indigo is peculiarly adapted to our soil and climate, and indeed one species of it is indigenous in the Southern States. The pigment prepared from this, is believed to be of a superior quality to that obtained from the foreign plant. For domestic purposes, it has been always used by the farmers of the country, in its wild and uncultivated state. Under the Colonial Government, Indigo was extensively cultivated in South Carolina, and was a source of wealth to the planters on the Santee, and its tributaries. Its cultivation, however, was almost entirely abandoned after the introduction of Cotton; and little is now known of the mode of culture, and its preparation for market. Cotton has, at length, been pushed to the utmost extent of its productiveness; and the foreign demand for it affords to the cultivator but a small remuneration for the labor and capital employed.

The period, therefore, has arrived, when we should examine into our resources, and follow up, with renewed activity and zeal, the multiplied channels, through which our industry and enterprise might successfully extend their pursuits. Let the Planters of the South, in time, and before the evil day arrives when the production of this great staple shall have overreached its consumption and demand, withdraw a portion of their active capital from its cultivation, and direct it to other objects. Happily for us, many objects of encouraging pursuits already present themselves. The manufacture of Sugar from the Cornstalk, may be considered as fully realized. The rearing of stock to an extent adequate to the home demand, has been proved, by judicious experiments, to be entirely within the power of the Southern Farmer. The fabrication of the Cotton into domestic clothing, by the aid of the hand-spinning-machine and the flying shuttle, may be profitably effected, without any considerable diversion of labor from the general business of the farm. Almost all the necessaries of life, and many of its luxuries, are attainable by means, within the reach of every tiller of the soil, through his own resources. All these may be accomplished with few sacrifices, and at a trifling expenditure. Let the system, then, be practically carried out by all, and there will be little danger of our surplus Cotton wanting a foreign market; and less ground for apprehending pecuniary embarrassments and distress, under casual depression of prices.

The Southern Planter, who thus husbands his resources, and wisely employs all the means which the God of Nature has placed within his control, is truly the independent sovereign of all he surveys, and is more above the reach of contingencies than the monarch upon his throne.

Permit me, Mr. Editor, to call the attention of a portion, at least, of the Cotton Planters, to the cultivation of the Indigo; and, through your paper, to communicate such information on the subject, as I have been able to procure from the best authorities. I write not from my own experience. The directions for preparing the pigment, I obtained, many years ago, from an old and respectable Planter in South Carolina. The manuscript which he delivered to me, was from the pen of one who had been extensivly engaged in the cultivation and preparation of Indigo for market, before the Revolution. It has never been published; and may, therefore, impart information on a process little known by the present generation.

The pigment, or dyeing substance of the Indigo, is obtained from the leaves. There are several species of this plant. The *Indigofera tinctoria*, or French Indigo, yields the greatest quantity, and is cultivated in India; but the quality is inferior to the *Indigofera argentea*, or wild Indigo. The former is distinguished by its pinnate leaves, the smaller ribs expanding from the principal rib like the feathers of a quill, similar to the leaves of the pear, and of the lime-tree, and by a more slender, ligneous stem. It rises, in a rich soil, and when well cultivated, to the height of six fee..

The seeds are sown as early in the spring as the climate and season will warrant. In the West Indies, the planting commences in March, in trenches about a foot asunder; and the weed is cut down in May. In South America, six months elapse before it can be cut. In the former, generally four cuttings are obtained of the same plant in the course of a year; but, in the latter, never more than two, and often only one. The cutting takes place when the plant is in blossom, and is done with the sickle. Fresh plantings of the seed are required yearly.

Commence the cutting of the weed in the evening, in time to have the steeper set before it is dark. The plants are laid in strata, and pressed down by weights. When a sufficient quantity of them are laid, pour in water to the height of about four inches above them. One inch and a half above the surface of the water, bore a hole through the side of the vat, and directly over the trough, which is to convey the liquor into the beater. When the fermentation has commenced, the liquor will rise and run over. Let it remain until the stream has ceased, or nearly so. This, in hot weather, will be from ten to fourteen hours after the water has been poured upon the weed, or on the following morning. *Immediately* draw off into the beater, and commence the agitation. Continue this for about twenty minutes, and then let in the lime-water, until you have plenty of grain, but not very coarse. The agitation must be carried on, and frequent use be made of the plate. As soon as a change in the color is perceived, from a muddy green to a purple or blue, the beating should cease. This operation usually requires an hour. There can be no certain rule as to the quantity of lime-water to be used, or the length of time for continuing the agitation. If the Indigo be not sufficiently steeped, it will require more lime-water, and longer beating, and *vice versa*. Having obtained the fine blue tint you wish, stop the agitation, and pour in an additional quantity of lime-water, which will cause the grains to collect and settle in a short time. Be careful, however, not to add so much as to give the liquor a yellow or red tinge: it should be of a clear, but pale green. As the sediment subsides, commence drawing off the water through the upper plugs, and so on to each successively, until the mud alone remains at the bottom of the vat or beater. In the evening, this should be removed into the drainer, and by the morning following, it will be well drained and cracked; which it should be before it is taken out. Having first pressed out the water remaining in it, work up the mud; give it a second pressure, and work it up again until it becomes stiff. After this, submit it to a third pressure, for cutting. Should your Indigo incline to mould, on the drying boards, as it is apt to do in rainy or damp weather, the mould must be wiped off; otherwise it may turn to a grey color. Let it remain upon the drying-boards until you plainly see the quality; afterwards, it may be put up in small barrels. In continued damp weather, during the manipulating and drying process, put the greenish Indigo in the sun, and turn it frequently. As soon as it begins to crack, take it in.

Good Indigo is known by its lightness, or small specific gravity, indicating the absence of earthy impurities; by the mass not readily parting with its coloring matter, when tested by drawing a streak with it over a white surface:

but, above all, by the purity of the color itself. The first quality, estimated by this last test, is called, in commercial language, *fine blue;* the next, *ordinary blue;* then, *fine purple*, &c. The most inferior is known as *ordinary copper.*

The Indigo of Java is superior to that of any other country. The importations into the United States, are chiefly from the British East Indies, Manilla, the Philippine Islands, and from Colombia.—(Comm. Dict.)

McCulloch states, "that the culture of Indigo in the East is very precarious, not only as respects the growth of the plant from year to year, but also as regards the quantity and quality of the drug, which the same amount of plant will afford even in the same season." The favorableness of our climate will secure the cultivators, in this country, from such losses. This is applicable to the culture of Cotton; and the advantages we have in this, will place us beyond the contingencies, in respect to the Indigo, to which the Eastern countries are subject, from the peculiar character of their climate.

A SUBSCRIBER.

Claiborne, Ala.

For the Southern Cultivator.

CURE OF SWINEY.

Swiney is a disease, by which many of our finest road horses are annually retired from the saddle or harness, and turned out to pasture as almost worthless, or sold for one-third their value. We have seen and tried a number of prescriptions for the relief of this troublesome affection of the shoulder, such as ironing, rubbing with the oil of earth worms, and various stimulating liniments, the introduction of seatons, lengthy incisions with a deposit of poke root, to produce suppuration, &c.; many of which are worthless, and others both cruel and injurious.

The disease may be cured in less than a month, and the horse used daily if necessary, though it is best to give him rest if convenient. As soon as you discover the disease—which will be known by noticing the horse while standing after use, and it may be seen even in the stall, he will sustain the weight of the body on the opposite limb, and put forward the limb of the affected side, permitting it to touch the ground but lightly, limps when hurried down hill, the muscle upon the shoulder becomes thin, and in many instances the skin contracted and tight,—put a twist upon his upper lip, and introduce the small blade of a common pocket knife, (the point of which must be sharp,) into the thinnest part of the shoulder, which will be near the upper margin of the shoulder blade, and push it directly in until you reach the bone, holding the knife as you would a pen when writing, and scratch up the membrane that covers the bone for a space the size of a silver dollar; the knife may then be withdrawn, and after the small quantity of blood that follows is wiped away, the orifice will not be seen. The knife may then be introduced in one or two places below the first, and used in the same way, and the operation is over. This may be repeated in six or eight days: we have but seldom found it necessary to repeat the operation more than twice or thrice, and in many cases a single operation will effect a cure.

Appling, April 10th, 1844.

LECTURE,

On the Elements of Horticulture, delivered before the Agricultural, Horticultural, and Botanical Society of Jefferson College, Miss., at Washington, Wednesday, 1st November, 1843—By THOS. AFFLECK.

LADIES AND GENTLEMEN:—I would just remark, before entering upon my subject, that this being my first attempt at any thing like a public lecture, I would crave your kind indulgence.

The subject I have chosen is, *the nature and structure of plants, applied especially to the theory and practice of Horticulture.* It is a subject embracing a wide field; and one on which it would be difficult to give you much that is really new. But, though many of my hearers are, no doubt, fully as conversant with the subject as I am, and are as intimately acquainted with the works of Decandolle, Knight, Lindley, *Teshemacher*, and others to whom I shall be largely indebted before I close, I shall yet be able to lay open to many of those present, much that is new and interesting in the wondrous laws and operations of vegetable life. And I would especially crave the attention of the ladies, as I shall here endeavor to answer sundry enquiries made of me relative to this subject; and especially in its application to the culture and propagation of flowers and shrubs. I must beg of them, however, to take my *precept* rather than follow my *example*—as I fear that if they judge of me by the condition of my garden, they will not place a very high value on my advice. However, ladies, let me suggest, that though the tree must be judged of by its fruits, it must have time and opportunity to produce that fruit! But, enough of preface.

I have brought with me a few specimens of plants, and parts of plants, that I may enlist the eye as well as the ear, and thus be enabled to make myself more easily understood than I would be otherwise.

Here, then, is a plant which all will recognise, as affording the principal, nay, *only* staple of this region—the cotton plant. Here we have roots, stems and branches, leaf-buds and leaves, flower-buds and flowers, fruit, or seed-vessels and seeds—for the perfection of which last, the seeds, the functions of all the other parts are exercised.

Within this little seed is contained the perfect plant—the embryo, or small particle of pollen—the fertilizing principle, deposited whilst the flower or blossom is in perfection, upon the pistil, by means of which it is conveyed to the cells or seed-vessels, where it is vivified and becomes a perfect seed. Here we have the perfect plant, whether it be the most minute grass of the meadow, or the tallest tree in the forest. This is the means employed by nature for the re-production of plants. But though, under ordinary circumstances, each seed will re-produce its own species, it is by no means certain that it will reproduce the particular variety by which it is borne. Yet, in annual and biennial plants, no other means can be employed to propagate varieties—hence the necessity of removing from those plants, left to produce seed, all others of the same species, or even genus, which would be likely to affect, by the dissemination of their pollen, the variety intended to be perpetuated. Thus, where any variety of cabbage is left to go to seed, no other sort of cabbage, or of kail, or even of turneps, which also belong to the *Brassica* family, should be permitted to show flowers at the same time, in the same garden, unless very extensive. So of cucumbers, melons, pumpkins, squashes, gourds, &c., which all, more or less, affect each other. When care is taken to prevent this—where, by a careful eradication of all varieties likely to affect those left to produce seed—by preserving none but the most genuine forms of a sort for seed-plants—and by compelling a plant, by transplantation, to expend all its accumulated sap in the nourishment of its seed, instead of in the superabundant production of foliage, a crop of seed may be procured, which will produce plants *possessing in a great measure the peculiar properties of the parent variety.*—Thus, by a careful selection, for a series of years, of any vegetable which possesses peculiar form, color or other quality, that peculiar quality becomes as it were fixed, and the plant is capable of producing seed, which will reproduce the counterpart of the parent plant. Witness the different sorts of cabbage or lettuce, which would require but a very slight degree of neglect, in leaving two or more varieties to bloom near each other, to sport, as it is termed, to such extent, that no particular sort would be expected from the seed so produced.

Of this readiness, in cultivated plants, to sport, or produce varieties from the seed sown, gardeners have taken advantage, and have made use of it to produce such changes as they desired. This is principally effected by what is termed *hybridising*, or the impregnation of one variety by the pollen of another. And also by the peculiar treatment of the seed-producing parent—because, as it is found that those plants which have been best nourished, produce seeds which preserve the individual character of the parent most distinctly, it consequently follows that where the object is to *produce varieties*, it will be advisable to lessen the supply of nourishment, by shortening the roots, and replanting in a poorer soil. This and other means, are used by gardeners to produce not only new and improved vegetables, and the endless varieties of beautiful flowers, but also new fruits. The celebrated Belgian Horticulturist, the late Van Mons, by such a system as that I have just touched upon, gave to the world, during his life-time, several hundred varieties of pears, which, for their excellence, as far surpassed the generality of those previously existing, as the bellflower excels the crab-apple.—(*See Note A.*)

But to return to the subject directly before us—the seed of the cotton plant—here we have this seed giving the first evidence of vitality, the embryo plant within has burst its shell, where it lay dormant until it was placed in fitting circumstances to call it into active life. These circumstances are a temperature above the freezing point; a moist medium, such as earth, darkness, and exposure to air. When so placed, the seed undergoes certain changes—one extremity of the young plant, as we see here, ascending for the purpose of finding light, and forming leaves and branches, through which to carry on those chemical changes, necessary to its growth and existence; and the other extremity descending for the purpose of finding a constant supply of crude nutriment, and becoming perfect roots.

The *root* is the part that strikes into the earth when the seed begins to grow, continuing to lengthen, for the double purpose of fixing the plant in the soil or to some firm support, and of absorbing food in a fluid or gaseous state. Roots are distinguished from the stem by the absence of leaves and leaf-buds, of evaporating pores, and of pith in most plants. Hence such underground bodies as the tuber of the potatoe, the bulb of the onion, hyacinth, &c., are not roots. Roots do not absorb food by their surface; it is chiefly by their young and newly formed extremities, called *spangioles.* Hence the preservation of the spongioles uninjured is essential to the successful removal of a plant from one place to another, and care should be taken to preserve the smallest fibres of the roots uninjured, instead of *trimming them off*, as is usually practised.

Whilst touching on the subject of transplantation, I may remark that it is an operation requiring much more care than is usually bestowed on it. The most trifling plant, worthy of removal, is worthy of being handled with care. If a plant be removed by digging it up so as to leave nothing but a *club* where the *mass of roots* should be, and tramping it into a hole barely large enough to receive it, leaving it unstaked to be shaken about by every wind that blows, what reasonable hope can be entertained that it will do more than send forth a few sickly looking leaves, to wither and die during the summer? Whether the plant be large or small, an evergreen or not, remove it with a large ball of earth. If it be a good sized tree, there is the

greater occasion for care in its removal. Stake it effectually, so that it cannot be shaken about; if it is loose, the roots cannot exercise their functions.

The preservation of the spongioles, or rootlets, is indispensable to the vigorous growth of the plant. Hence, *deep plowing*, after cotton and corn have attained growth sufficient to send their roots out into the furrow in search of nourishment, is decidedly injurious. Hence, also, if, when a plant shows too strong an inclination to run up into stalk and leaf, a coulter be run close to the plant, the supply of nourishment is checked, and fruit-buds instead of leaf-buds formed.

The spongiole is the most delicate part of a plant, and the most easily injured; and, as it has no power of selecting its own food, but will absorb whatever may be brought in contact with it, in a sufficiently fluid state to be taken up by it, they not unfrequently, being developed in a soil of an unsuitable nature, absorb matter that proves injurious or fatal to the life of the plant. This may explain why trees suddenly become unhealthy, without any external apparent cause. The removal of the surrounding soil, and replacing it with some good compost, will most commonly effect a cure.

Plants have the power of replacing spongioles, by the formation of new ones; so that, though plants are seriously injured by their loss, they may yet recover from the injury. But this power depends upon the co-operation of the atmosphere and other circumstances. If the air is damp enough to hinder evaporation from the leaves, spongioles will have time to form anew; but if the atmosphere is dry, the loss by evaporation will be so much greater than can be supplied by the injured roots, that the whole plant will dry up before the new spongioles can form, and death will ensue.

Here we have a key to the operations of transplantation and propagation by cuttings, scions and buds. Although, as I have before remarked, roots are destitute of leaf-buds, and leaf-buds being essential to the multiplication of an individual, it would follow that roots can never be employed for the purpose of multiplication—yet, some roots have the power of generating leaf-buds under certain circumstances, as the quince, &c. The cause of this power, existing in some species and not in others, is unknown, and is a power not to be depended upon. Cuttings set out previous to the appearance of the leaves in the spring, will take root and grow; but this, like the exception just spoken of, cannot be relied on, and is only discovered by accident. The grape, and many other vines, some roses, jesamines, &c., have this power, and may be propagated in that way. If attempted, let it be in a sandy or porous soil, in which bury the cuttings, which should be of some length, so as to leave but a single bud above ground. It a little grafting-wax be put on both ends, it will render the experiment more certain. The immediate cause of the formation of roots is at present involved in obscurity; but the fact is well known that some plants, when being propagated by cuttings, produce roots with much more facility, and in a shorter time, than others. During the summer, after the young shoots of that season have made a growth of two or three inches, is the most favorable time to form plants from cuttings. The proper medium to use, is two parts of sharp sand from the creek, and one part of good earth, or *leaf-mould*. After laying a foundation of a few inches of gravel, or broken bricks, inside of a box or frame, form a bed of the mixture of sand and earth, say to the depth of eight inches, nail a few uprights round the frame or box, in such a way as to support a mat or piece of old carpet, to keep off the sun and air. It is better, when it can be done, to lay a glazed sash, as in forming a hot-bed, over the bed; which again can be shaded by matting. Where the experiment is on a small scale, or the cuttings rare, a flower-pot and tumbler or bell of glass will answer every purpose. The cuttings, as I before remarked, are formed of the young shoots of two or three inches in length—the shorter the better—cutting off with them, with a square cut, half an inch or so of old wood; trim off all the leaves but one or two, and insert the cutting in the bed, leaving only a bud or two exposed, and within an inch or two of each other. They must now be kept shaded, and in a close, warm, moist atmosphere—darkness, moisture, (from frequent watering, the sand not permitting too much water to remain, as it drains off,) and perfect rest being necessary, as well as a downward circulation of the sap, which is effected by the action of the leaves on the upper part of the stem—the roots not being able to exist of themselves, without the leaves to create the action of drawing up the juices the roots absorb—therefore, as a general rule, a cutting without leaves will soon perish. In three or four weeks, the cuttings will give evidence of growing, and may be carefully taken up, and planted out in nursery rows, and shaded and watered as long as necessary.

There are other methods of propagating, as by layers, single buds, and so on, but it will be unnecessary for me to say more on this subject—the preceeding hints will, I think, suffice.

To return to the roots and their functions. After the juices have circulated through a plant, and performed their destined offices, what remains unfit for its further nourishment returns to the spongioles, and is by them thrown off; this substance, so thrown off, is unsuitable, and even poisonous to that species of plants, yet is not so to other species; it may even be suitable to them. Thus, soil may be rendered impure, or, as we inaccurately say, *worn out*, for one species, which will not be impure for others. Here we have the true theory of the rotation of crops, which, in practice, is found to have created an entire new era in farming, and which we would do well to apply to our cotton crop. It also accounts for the fact, that young apple trees, for instance, cannot thrive when planted on the site of an old orchard; where, on the other hand, young peach trees would succeed well. It likewise accounts for the natural rotation of trees, which has been found to exist in the ancient forests of this part of the globe—and for the necessity of repotting plants grown in greenhouses every one or two years, and for many other circumstances hitherto unexplained. The root is never entirely dormant except when frozen; during the winter it is slowly collecting juices for the supply of the spring; where the period of rest, or winter, is long the store of juices is large, and vegetation in the spring is rapid and luxuriant. This accounts for the quick growth in northern climates, where plants commence their growth and mature their fruit within the short space of three months.

The stem is that part of a plant which is developed above ground, and which we here see taking an upward direction, on the germination of the seed, going forth to bear leaves and leaf-buds, flowers and fruit. The more erect a stem grows, the more vigorous it is. The stem is covered by bark, having pores on its surface, to stop up which would be as injurious to the health of the plant, as the closing of the pores of our skin would be to us. Hence, all thick, paint-like applications to the bark of trees are injurious if allowed to remain for any length of time. Whitewashing is considered particularly injurious, as well as in wretched bad taste. It is of great advantage, however, to give the stems of all fruit and shade trees a good scrubbing once or twice a year, with soft soap and water, at the same time scraping off all the rough bark or moss, that might afford harbor for insects, and close up or impede the pores of the bark. The stem is increased in diameter in some plants by the addition of new matter to the outside of the wood & inside of the bark; these are designated as *exogengus*, for example the oak. Others increase by the addition of new matter to their inside, as the cane, and are called *eudogenous*. All know the difference between *heart-wood* and *sap-wood*—how much more durable the one is than the other. The *heart-wood* was, when young, *sap-wood*, (or *alburnum*.) It has undergone a change which has rendered it solid, and much less subject to decay—secretions conveyed to them from the roots, have been prepared by the leaves, and returned downwards through the bark, and from the bark communicated to the central part of the stem. To give you a full account of the nature and properties of the different parts of the stem and bark, with the various discoveries in the circulation of sap, and the theories advanced to explain much that yet requires explanation, would compel me to encroach too much on your time, and moreover, is not altogether necessary to my purpose. Stems have the power of propagating an individual only by means of their leaf-buds—which are rudiments of branches, enclosed within scales, or imperfectly formed leaves. Leaf-buds are at first nourished by the fluid lying in the pith, but they finally establish for themselves a communication with the soil by means of the woody matter which they send downwards. Their developement or growth will, of course, be in proportion to their nourishment; and consequently when it is wished to procure a young shoot of unusual vigor, all others near to it are rubbed off, so as to accumulate, for that one shoot, all the food that would otherwise have been consumed by several. *Cutting back to a few eyes*, as it is termed by gardeners, is an operation in pruning, to produce the same effect, directing the sap as it ascends, into the two or three buds that are left on the shoot, instead of allowing it to be divided amongst the whole. Many of our finest flowering shrubs, the rose, crape myrtle, jessamine, and many others, are much benefitted by a pruning of this kind—but before practising it, it is well to have an eye to the peculiar growth of the plant. Many roses, indeed the greatest number of them, produce their buds at the termination of the young shoots—others again upon the short spurs from the old wood, and both should be pruned accordingly. The althea, crape myrtle, and others, bear their flowers upon the young shoots of that season's growth, which should therefore be nipped out, where they are too numerous, before they have made more than a few inches' growth. Those that are left, may be cut back to a few eyes, in the fall, by which, for the reason I have just given, they will throw out stronger shoots the following spring. Plants are very readily propagated from leaf-buds; in fact, they closely resemble seeds—differing, however, in the leaf-bud propagating the particular individual from which it is taken, whilst the seed propagates only the species. If a cutting with a leaf-bud on it, be placed in circumstances fitted to the developement of the latter, it will grow and become a new plant; certain of these circumstances I explained when treating of propagating by cuttings—of others I will treat presently. If this happens when the cutting is inserted in the earth, the new plant is said by gardeners *to be upon its own bottom*. But if it happens under other circumstances—when the cutting is applied to the dissevered end of another individual, called *a stock*, the woody matter which, when inserted in the ground, became roots, is here insinuated into the tissue or fibre of the stock, to which it thus attaches itself, and is said to be *grafted*; the cutting being called *a scion*. There is, therefore, little difference between cuttings and scions, except that the former root into the earth, and the latter into the plant. A piece of the stem—or cutting without a leaf-bud so treated will die; but a leaf bud separated from the stem will become a new individual, if its vital energy is sufficiently powerful. And this, whether it is planted in earth, into which it roots, like a cutting—or in a new individual, *a stock*, to which it adheres and grows like a scion. In the former case it is called *an eye*, in the latter *a bud*. This shows to you the principles of budding and of grafting. I came prepared to explain both of these processes to the eye as well as to the ear, but fear that I should

trespass too much upon your time and patience. Shall I pass it over, or shall I not?

[Here Mr. Affleck introduced specimens of various plants, upon which he illustrated the experiments to which he alluded in his address. We also had sent us the Western Farmer and Gardeners' Almanac, for 1842, with the request to make an extract from it, on budding, grafting, &c., but as we have not the necessary plates, we are obliged to leave them out.—Eds.]

To return to the subject of the leaf-bud. Where there are no leaf-buds, there is no addition made to the wood of the plant; its stem and branches will not increase in diameter—hence it is most injurious to trim up the stem of a young tree, a fruit tree, say—for, as the destruction of the leaf-buds is accompanied by the absence of wood, the tree cannot thrive as it would otherwise. There are, in addition to the regular leaf-buds, that are called *adventitious*, or those produced by particular circumstances. They may be generated by sap in a state of great accumulation and activity, produced by abundance of nourishment—by a healthy, vigorous plant being cut down, and so on. When this excessive vigor is produced in a plant, it is favorable to the production of leaf, in preference to blossom-buds. This would lead me to the subject of pruning again, and particularly grape vines, but I must pass it over for the present. The leaf-bud and the flower-bud are supposed to be the same in the earliest stage of their organization; but soon after, the change takes place. Excessive vigor is favorable to the production of leaf-buds, and consequently of wood. On the contrary, when rapid and vigorous vegetation is checked, blossom-buds and consequently fruit will be in abundance; thus, fruit is seldom borne on the thick vigorous shoots of the peach and other fruits, but generally on the slender and less vigorous ones. If an unproductive tree is transplanted, it often becomes productive from the check given.—(*See Note B.*)

Leaves are, as it were, the *lungs* of the plant. They elaborate the sap which has been collected by the spongioles of the roots, and conveyed to them, the leaves, by the alburnum or sap-wood, converting it into the secretions peculiar to the species; their structure enabling them to expose the sap, for this purpose, to the action of the atmosphere. Scattered over the surface of the leaf are numerous apertures or cells, called *stomata*, which have the power of opening or closing as the circumstances may require. And as it is by their means that the preparation of the necessary secretions go on, and being of such vital importance to the plant, it is absolutely necessary to the health of the plant, that they be not choked up with dust or dirt, or injured by insects, or otherwise destroyed or removed. The cleaner the leaves of a plant are kept, and the more they are exposed to a moderate degree of light and air, the more the plant will flourish. We thus find the leaf to be a beautiful contrivance for exposing a large surface of crude sap to the influence of the external air and solar light, by the operation of which it is rendered capable of being converted into the different substances required for the growth of the plant, and the production of its fruit and seed.

The flower is that part of the plant destined to form and perfect the seed. It has two principal parts, the calyx or outward envelope, and the petals forming the corolla. In this specimen the petals are colored, and give beauty to the flower; but in some plants the reverse is the case—the calyx is colored, as in the Fuschias. Here are the stamens—here the pistil. The *stamens* bear on their summits an organ, called the *anther*, which contains a powder called *pollen*. When the anther is full grown, it opens and ejects the pollen, either dispersing it in the air from the elasticity with which it opens, and by which it reaches the summit of the pistil; or at once depositing it there, or exposing it to the action of the wind, or to insects, carry it to its proper destination. The pollen consists of exceedingly minute hollow balls, or cases, containing myriads of particles called *granules*, which are the fertilizing principle of the stamens. These are light, and being only liberated from the anther during very dry weather, are scattered by the wind and insects to a great distance. Hence the necessity, of which I before spoke, for keeping plants, that are left to produce seeds, as far apart as possible from each other, where of the same species. In double flowers, the stamens are transformed into petals; or the petals and the sepals, or leaves forming the calyx, are multiplied—hence, few double flowers produce many or perfect seeds. The pistils have at their base small cells or cavities—in the ripe state called seed sepals—in which bodies called *ovula* are placed. These ovula are the rudiments of seeds, and are vivified by the pollen conveyed to them through the pistil. In wild plants, the stigma or secreting surface of the pistil, is usually acted upon only by the pollen of the stamens which belong to it. In this case, the seeds thus vivified, will, when sown, produce new individuals differing very little from that by which they themselves were produced. Therefore, wild plants multiply from generation to generation without change. But gardeners use artificial means to cause deviations from this law; they take the pollen of one species, and with it impregnate another species, by which they seek to produce seeds that will originate an individual possessing properties common to both parents. (*See Note A.*) These are called hybrids, and were at one time, reasoning from analogy, supposed to be sterile; but experience proves that hybrids will produce perfect seeds. These seeds, however, are of course not to be relied upon to perpetuate the particular variety that produced them; this must be done by cuttings, buds and grafts. The fruit, in the plant before us, is represented by the cotton boll. The outer rind here takes the place of the edible flesh of the apple, the pulp of the peach and so on—being a provision of nature for the protection of the seed. The fruit, strictly speaking, is the pistil arrived at maturity. When the calyx adheres to the pistil, and forms a part of the fruit, as is the case with the apple, pomegranate, &c., that fruit is called *inferior*. But when the pistil alone ripens, the calyx not adhering to it, as is the case here, and in the peach, the fruit is called *superior*. A *superior* fruit consisting of only one, or of a very small number of transformed leaves, it has not, like the branches, the power of communicating with the earth, and of feeding itself, and elaborating or preparing its own food, but must depend upon the leaves on the young shoots above it—as we see here, and in the peach: but *inferior* fruit, having the calyx leaves at its termination, has a more powerful communication with the branch, is enabled to attract its own secretions or food more readily, and does not require the assistance of leaves above it. These facts require to be borne in mind in pruning: but, as the remarks I before made on this subject will apply here, I will not repeat them.

And now, having followed the plant through its entire course of existence, from its first appearance from the seed, until the seed is again produced, I will come to a close—assuring you that I feel grateful for the attention you have given me, and the patience with which all have heard me through a lecture that must have been somewhat dry to many. It has assisted me in what would otherwise have been quite a task—*my first public lecture.*

Notes.—(A.)—Dr. Lovelace, of Wilkinson county, submitted to the appropriate committee, at the fair, a specimen of *cotton*, which I presume to be a *hybrid*, that certainly, in its extreme fineness and length of staple, and in its productiveness, promises to reward Dr. L. for his enterprise. The variety seems to be already tolerably well established, but I have no doubt yet sports much; and will require some years of careful cultivation apart from any other variety, and selection of seed, to ensure *a distinct variety.* Dr. L. deserves the thanks of the society, which have been awarded him. He has mine, sincerely, for the few seeds in my possession, which I shall endeavor to increase.

(B.)—Although this has long been proven an established fact—that the curtailment of the roots, or by some other means giving the plant a check in its growth, will cause the production of fruit-buds and fruit, it has but recently been included by gardeners as a part of their regular practice. The Pear is well known to be long in producing its fruit, particularly seedlings, or grafts upon *free* stocks, or tall-growing stocks. By laying bare the roots of a tree, which continues year after year, to grow vigorously, but produces no fruit, and pruning away the largest lateral roots, it will be thrown into bearing almost immediately—at all events, after the lapse of a season.

From the Central New York Farmer.

THE EFFECTS OF AGRICULTURAL PAPERS ILLUSTRATED,

OR THE STORY OF UNCLE TIM AND HIS SON.

Mr. Timothy Treadmill, was about the tightest man that ever came from "down east," but although penurious in the last degree, he never became very rich. He was a firm believer in the doctrine of "following in the footsteps of his predecessors," and practiced it to an iota. The way his father planted corn, he planted it; the same time in the moon that his father sowed peas, he sowed them. The last pair of cart wheels that were seen wearing a streak tire, were Uncle Tim's—and the last of the old wooden plows was seen mouldering into its original elements at the back side of his wood-house. In short, with the exception of adopting some few improvements in the way of implements, he was precisely as good a farmer the day he left his father's roof, as he was forty years afterwards.

That there was any better way of farming than that practiced by his father and all the rest of the good people down in old Connecticut, for so long a time, nothing short of actual demonstration could make him believe. The idea of *improvement* in farming, seemed to be as absurd in his mind, as that the bees should set about making an improvement in the construction of their cells, or the birds in building their nests. Book farming and *new notions* were his utter abomination. What! such men as Judge Buel, who never pretended to be a farmer till he was forty years old, undertake to teach *him* how to raise corn and potatoes, who had been a farmer all his days, and his father before him. *He* take a *newspaper* to learn how to farm! No—he knew better than to pay his money for such foolery as that. If any body wanted to read the big stories of *them new fangled farmers* about Albany, about their great crops and their new fashioned kinds of cattle and hogs, he was willing they should: but, for his part, he believed he could farm about as well as those that printed newspapers, and raised spotted hogs to sell.

His farm was "suitably divided into mowing, pasturing, tillage and wood-land." What was in pasture when he bought the farm, remained in pasture still, and what was "mowing" at that time, the plowshare had never disturbed, and what was plowland then, remained still the same. His manure always laid at the barn till fall, because it was so much better for corn after it was nicely rotted; and his barn-yard was so situated that the water would run from it in all directions—of course it was always *nice and dry.* When he happened to have a little manure left after planting, he has been known to put a little sprinkling on some spot in his meadow, where he thought the daisies and June grass were likely to run out; but as long as the daisies flourished well, he was not alarmed, for he said the farmers down in Conn., thought they made about the best hay of any thing. In hoeing, he was not over-anxious about the weeds, for he said they kept the ground light and moist, and that where the quack grass was thickest, he always had the best corn. But as Uncle Tim was not deeply

read in natural philosophy, it did not occur to him that the corn and quack grass both would grow most luxuriantly on the richest spot of ground.

But, as I said before, Uncle Tim never grew very rich; for, although he saved every thing, the fact was he had *not much to save*. His cattle and his fields being lightly fed, fed him lightly in return. It seemed to him that all he gave his cattle, beyond what was barely sufficient to keep skin and bone together, was about the same as thrown away, and every hundred of hay he could save to sell in spring, was so much clear gain. And, as for laying out any expense to increase his quantity of manure, it was a thing he never dreamed of. But, as I said before, starving his cattle and his crops proved to be a bad business, for there seemed to be a fair prospect that it would end in starving himself. He could perceive that the products of his farm gradually diminished from year to year, still he never seemed to suspect that the cause was to be attributed to his bad management.

There were, however, good things about Uncle Tim. And, although errors and prejudices of this kind seem to be, in a great measure, inexcusable, his were entitled to as large a share of charity as those of most other men. There was one thing about which he evinced quite a commendable degree of liberality. He had a son growing up to manhood, and his better feelings induced him to go so far as to say, he thought young people now-a-days ought to have a better education than they had forty or fifty years ago, when he was a young man. In fact, he afforded his son a very tolerable opportunity for acquiring a good common education. And finally, young Timothy was becoming quite a reading, and consequently, intelligent young man. This, however, led to consequences entirely unforeseen by the father, and which, for a while, gave him a good deal of uneasiness.

In his intercourse with the more intelligent of their neighbors, the young man had occasionally met with agricultural papers, and perused them as far as opportunity permitted, with a good deal of interest. He perceived that many of his father's notions about farming were erroneous. The evidences that great and important improvements were taking place, were, to his mind, altogether irresistible. And, although he well knew that his father would oppose any innovations, he began occasionally to make known the result of his reading and reflections on the subject, by proposing some little changes in their mode of management, and finally intimated that he should like very well to take the Cultivator. But it was a desperate case; for, whatever faith Uncle Tim might have had in more distant things, it was clear that in the matter of *agricultural improvement*, he had neither faith nor works. The old gentleman, while he felt disposed to gratify his son in all prudent desires, could not but feel vexed to find him inclined to depart so far from what he considered "the good old paths." Things went on, however, much after this fashion, for considerable time. Timothy would occasionally quote Judge Buel, and speak of the increased profits of the improved methods of husbandry. But, to all these representations, the old gentleman had always a ready answer. All this, he said, might do very well for *rich men*, who lived near a market, where all the productions of the farm would sell for ready money, and plenty of manure could be had near by and for little or nothing. But, for small farms, situated as they were away back in the country, to attempt to take these big men for a guide, would be ruinous extravagance. One of Timothy's suggestions, however, rather staggered him.

"Well, father," said he, one day as they went out toward the barn just after a shower, and the streams of water, as *black as your hat*, were running out of the yard—"I think there is one thing we small farmers in the country might do as well as the large ones that live near the cities. If we can't buy manure, we might take care of what we have. You see that if our barn-yard was *turned bottom up*, it would be just in the shape recommended by Judge Buel, and would hold all this liquid manure that we see running off into the road."

Somewhere about these days, it came into the heart of Uncle Tim, to visit his old friends and relations down in the land of wooden nutmegs; and, as his son had never seen much of the world, he thought it might be well enough for him to go along too: so, after mature deliberation, it was decided that it would be most economical, on the whole, to go with their own conveyance. Old gray, to be sure, had been worked hard and not *very high fed*, and was a little thinish, but Uncle Tim guessed he'd do to go well enough—he would have a good rest and good keeping down there, and plenty of time to recruit after he come back. Well, after preparing their box of provisions and their bag of oats, they set off.

But Uncle Tim had never foundered a horse in all his life, by giving him too many oats, and he didn't mean to begin then; so the bag was not a very big one, and the journey was somewhat longer than they calculated—old gray was a pretty slow horse the latter part of the journey, and if he could have told his mind, would probably have said he was very glad when he reached the end of it. He had then a week or two to rest, but it seemed as if hard times had got to Connecticut before they did, for the granaries were very poorly supplied with oats. The time, however, soon arrived when they were to set their faces homeward; and the poor old horse, although somewhat rested, was not very much improved in his capacity to perform a journey. Even their small bag was but scantily filled, and to buy oats on the road, seemed to Uncle Tim a very improvident way of travelling. So they jogged on with such speed as the circumstances permitted; but before they were within fifty miles of home, old gray gave out, and they were obliged to haul up. The fact was, old gray was a good horse, but he was *used up*. Although he had been a good horse a great while, it was not old age that prostrated him. He had skin and bone and muscle, and wind, and four sound legs. The machine was in order, but the *moving power* had been withheld. The poor old horse was as useless as the steam engine without the steam.

Well, Uncle Tim and his son were in a bad fix. Their passage home in the stage would cost considerable money, and then to leave old gray there to recruit, and the expense of sending for him, would increase the sum to a pretty important amount—and they could hardly think of selling the old horse for the small sum of ten dollars, which was the most they could get offered for him. The result of their deliberations was, that old gray was left with a farmer near by at a moderate expense, and the father and son took passage home in the stage. It so happened they were the only passengers, so they had plenty of time to think, and occasionally, as the spirit moved, to talk a little.

"Well, father," said the young man, after a pretty considerable long silence, "I don't know as you think as I do, but it appears to me that our farm and old gray are very nearly in the same situation."

"I don't know," said his father, "what there can be about a farm and a horse, that can make them resemble each other so very much."

Timothy then undertook to explain.—"There is, said he, what was *once* a good farm, and the foundation on which to make a good farm now. So there is what was *once* a good horse, and a good frame to make a horse of now. But both have been so overworked and poorly fed, that they have become exhausted and are of but little value. The farm, you know, produces little, if anything, more than enough to pay for the labor we bestow upon it, and the value of old gray we have had a pretty good opportunity of testing. Now, it appears to me that I can convince you that under a different course of management, both the farm and the horse would have much more than repaid the extra expense estowed upon them, and been worth at this day more than double what they are. I am very certain I can as respects the horse, and it is equally clear to my mind with respect to the farm. Suppose, then, we had given the horse one peck of oats per day, for the last two months in addition to what he has had—would not that have enabled him to work considerably harder than he has done, and kept him in good condition? The old gentleman could not but admit that he thought it would. Well now, said Timothy, do you not think that if old gray was in good working order, he would sell for forty dollars? Yes, and more too, was his father's prompt reply. Now, said the young man, let us calculate the cost of the oats: one peck a day for two months, would be nearly sixteen bushels—that, at twenty-five cents per bushel, would amount to four dollars: and, as things have turned out, I am sure you will be willing to admit that sixteen bushels of oats, disposed of in that way, would have been a very judicious expenditure, as, according to our calculation, it would have produced a difference of thirty dollars in the value of the horse."

"But, said his father, "old gray is actually worth more than ten dollars, as it will not cost thirty dollars to recruit him up."

"Perhaps not," said Timothy, "but whatever it does cost, added to the expense of our getting home, and the loss of the work of the old horse after that, would, at any rate, have been saved by the four dollars worth of oats. And now," said he, "with regard to the farm, you have always told me that it was originally rich and produced great crops, and if it were as good now as it was then, could we not make one hundred dollars more easily than we can fifty now?"

"Yes," said his father, "I suppose we could."

"Well, now," resumed the young man, "the only question is, whether or not it could have been kept up in its original state of fertility till this day, with the ordinary available means, by a different course of management. I think that it could—and will try and explain, as well as I can, with my small knowledge of improved husbandry, what course of management would have been required to effect so desirable a result. The first great object would have been to increase, by all prudent means, the quantity of manure, and either to use it in a fresh state, or prevent waste by washing or evaporation; and one means of accomplishing this, would have been, to *sell no hay*, unless a corresponding amount of manure could have been purchased, but to keep more stock, or perhaps, to feed what was kept better, so as to consume all the fodder at home. The next change would have been to divide the farm into smaller lots, so as to pursue what is called a rotation of crops; that is, that the whole may be in turn manured and appropriated to the different kinds of crops: other changes would have been to cultivate the land better, to procure more and better implements, and to pay more attention to the breeding of animals of all kinds.

"These are the important changes required by what is called "improved husbandry." There are, of course, many small matters belonging to each that I have not mentioned.

"And now, although the farm is, as we say, *run out*, a resort to the same measures will raise it to the desired state of fertility; but the improvement must, of course, be very gradual unless considerable expense is laid out at the commencement, for manure, fencing, &c. I am aware that this may not appear so plain a case as that of the horse, but I am not able to see how any one can, upon reflection, avoid coming to the conclusion that the two cases are precisely similar. The *fact* is, they have both been starved, and for all useful purposes, in their present state, are of very little value. By good feed and proper management, both may be restored."

Uncle Tim kept cool all this time, but it was

evident, from the way he used up the cuds of tobacco, that he felt a leetle uncomfortable.

"Well," said he, "I don't think that I shall ever become much of a *book-farmer* myself; but, as I am getting old, and as I expect the farm to be eventually yours, and as you are so confident that these new ways are the best, I am willing that you should take the management and try, and satisfy yourself and *me too*. I will try and look at your management without prejudice, and at the end of three years, should we both live till that time, if I feel satisfied that the new way is the better way, you shall have a deed at that time."

We will only add, that sometime before the three years expired, Uncle Tim's deed was made out, "signed and sealed;" and what was still a greater wonder, he had become a constant reader of the Cultivator, and said he really did think that Judge Buel had done some good in the world.

Finally, we cannot but hope that many Uncle Tim's are every year becoming converted from the error of their ways.

From the Albany Cultivator.

SUGGESTIONS TO COTTON PLANTERS.

Willis Gaylord—Sir—I quote here your queries propounded to me in your very friendly letter, also the remarks following those questions, and will endeavor to give you what I think are the facts in the case, leaving you to use either, to satisfy yourself or others, as you may wish. You say, "it is an error in me to suppose that the cotton growing districts of the United States, mistake their true interests, by devoting their attention to that article so exclusively. Would not a more mixed husbandry, one that should secure to the planter, from his own soil, his required supplies of beef, mutton, bacon and bread, be preferable to risking all on one crop? I take it for granted, there is no good reason in the nature of things why this might not be; I suppose experience has demonstrated that there is no difficulty whatever in the growing of cattle, sheep, (and fine wooled ones too,) and pigs, in quantities sufficient for the wants of the planter; and that the system of extensive purchases of articles of food now so common, is more the result of habit than of necessity."

It gives me no inconsiderable pleasure to give you an answer to all this matter, by showing you what is now done by a great many farmers, and some planters, in this part of the cotton region, which may tend to stimulate others to equal exertions, and will show many, who live north of us, that we are not dependent for supplies to our northern friends, and thereby induce them to feel more like we were brethren and equals, than that we were dependents. The capabilities of our soil to produce, our climate to perfect, and the energy of the sons of a southern clime to effect reasonable objects when necessary, are misunderstood by many, in even this country, for that author of the effect of climate, is a southerner, and it is reasonable to suppose that there are far more in a northern country.

All experience has proved in every country, where yet tried, that mixed husbandry is preferable to a devotion to any one crop, and to a certain extent is true in the cotton region; we must have no other crop to interfere in the gathering, that requiring all the time and attention of the farmer. That there is too much reliance on the cotton plant, the practice of our farmers will be a sufficient proof, and that much other business might be introduced that would not conflict with the interest of the cotton grower, we all now believe.

We can assuredly make an abundance of beef, mutton, bacon, bread and wool, to feed and clothe us well; we can also rear our own horses and mules; and I make no question but what we could add sugar and molasses, with silks for our fair dames, would they but take hold in a proper spirit. I make not these assertions without absolute proof, and enough to satisfy any jury of 12 men in the United States.—My five nearest neighbors in this county, having near on to 300 persons in the aggregate, have made for the last 3 or 4 years more meat, corn and beef, than was necessary; I might add mutton also, although the quantity consumed is small. I can better say of myself than of others; I must therefore rely more on this, trusting a bare exposition of facts will be construed fairly.

I can make an average crop for any consecutive 10 years, (and am even willing that the last 4 be counted in, as I have been here myself only 4 years since 1836,) 6 bales of cotton weighing 400 lbs., 200 bushels of corn, 500 lbs. of pork, raise 5 lambs, 3 calves, per hand that works in the field, with 1 colt to 4 hands, and an abundance of oats, rye, millet and fodder, potatoes and garden vegetables, to feed one horse to each hand, all cattle in the winter daily, and whites and blacks. I have been much engaged in putting the farm in ship shape order, and have lost much time from the mere farm work, but I can make a better showing than this, and make no question that I will ere 10 years pass, make, besides my crop of cotton, (6 bales,) pork and hay for sale. I can even now sell off yearly some half dozen beeves, a few milch cows, 30 or 40 mutton, and have sold on an average, $500 worth for 3 years, without at all interfering with what I say can be made, or at all injuring in number or quality the stock that I found here on my return in 1839. I am not yet fixed, for you well know how long it requires to get a farm properly arranged: owing to this, and to a never ending range for hogs, I am harrassed yearly for meat. The pigs I had castrated and spayed in 1840, Jan. and April, for killing Dec. 1842, numbered 93, and although I had an abundance of corn, I did not kill *of them* over 20 head; the others I have never seen. I must raise my meat in an enclosure.

Now, sir, if one man can do this, others can, and if cotton will not rise over 8 cts., we will all do it, and do more, for we can and will make our own clothing.

The great difficulty in this country has been, cotton has been to all appearances, a remunerating crop, and in many instances only in appearance; for when it rises, and the planter sells a per hand crop of $300, every thing is high in proportion, and by purchasing every thing, he is really but little better off at the end of the year than at the beginning. My own opinion is, and I have made every reasonable effort to give it publicity, that it is a duty every man owes his family, his country, to make every thing necessary which will not withdraw his force from their trade, and after which, as much cotton as he can—thus making sure of bread, meat and work animals, so if he makes only 4 or 5 bales per hand, those few bales will be nearly clear.

I have a portion of a mutton now in my smoke house that is very passable meat, though not fat; killed off a rye patch, which was sown on the corn ground, no plow being used at all. This season being more unfavorable for sheep than any I have ever seen, continued rains, not a head of sheep has been housed an hour; and worse on my sheep than on natives, being part bred Bakewell. I killed some two of my choice veals this fall, no extra care or keep, and a beef near 4 years old, a spayed heifer raised entirely in the woods, with a run in the field after gathering corn; she weighed 426 lbs., and gave me 46 lbs. of tallow; she was, to appearance, no fatter than when turned in, and was only turned in to give flavor to her meat. I have got over 30 lbs. of tallow from a beef 6 to 7 years old, killed out of the woods. I therefore say there is no difficulty in raising either beef or mutton. Pork can be bought, raised in this county, at 3 cents—enough to prove that we can raise pork. My own opinion is, that we can raise pork cheaper than those countries where pork is the staple commodity. And here are my reasons: a farmer can cultivate 10 acres of corn land per hand, besides enough in cotton to ensure him 4 bales, and a large crop of oats and sweet potatoes; which, with the aid of a peach orchard, planting his corn land with peas and pumpkins, he can rear readily double the quantity of hogs he will require; he then can take time to handle these 4 bales so as to nett him, in price, over 5 bales, and give him the surplus quantity of pork a clear gain. Thus, in reality, making, by his staple production, a fair crop; which, as a matter of course, gives him the pork free of cost. Should he require a crop of 6 bales, let him plant for 5 and handle well, to make in price and saving of expense, the 6th bale.

A neighbor of mine has killed hogs averaging 300 lbs., this winter: they were raised entirely in the woods, as our stock hogs are raised, then turned into the pea field, and afterwards corn fed for a few weeks; clearly proving the good effect of crosses on his stock. Four years ago, his stock did not average 200 lbs., and raised as now, but the range far better: he has killed 46 that will over-go 275 lbs., some going to 320 lbs., 18 months to 2 years old. He has purchased of me boars at eifferent times. The exact weights I will ascertain, and publish in the S. W. Farmer.

We do not raise large cattle or hogs, or make large yields of corn, like our northern brethren; but have a fair range, and with land not worth over $5 to $15 per acre, we can afford to cultivate more.

I have a friend who, in South Carolina even, makes what is considered a fair crop there; and though he works something over 100 hands, yet makes corn to sell with his own meat. In an address delivered in South Carolina, by the Hon. Geo. McDuffie, he states he makes a fair crop, raises his own corn and meat, and even his work horses. I think this statement is made in his address; and I think it entirely feasible, for every county in a cotton growing State, to do the same, and supply its county seat with bread and meat.

Were I to devote myself entirely to a cotton farm, not attend to improving stock and buildings, I feel perfectly certain that I could sell as much meat as I would use, raise enough horses to fully supply the wear and tear, and yet sell my 6 bales of cotton. There are many even here who would doubt it; but, sir, I am a practical farmer, make farming my only business, and I feel that injustice is done, when called theoretical, because I have had the chance of receiving a first rate education, and read more or less every day of my life. I only ask for the same measure to be meted unto me, as is done to other men who reside on their farms, and superintend themselves all the minutiæ of farming. Yours, &c.,

M. W. Philips.

Log Hall, Miss., Dec. 31, 1844.

Wax for Grafting.—Melt three parts of rosin, two of bees' wax, and one of tallow, together; pour this, when melted, into cold water, a pound at a time. Having rubbed your hands with lard, work the wax in them till it is pliable, and when the water is forced out of it, it is ready for use, and will remain on the trees for three years. Use the wax sufficiently warm to spread easy; cover the top of the stump about the thickness of a cent, and the slit, as far as it extends, somewhat thinner.

The time for grafting depends much upon the season; but the best is when the buds first begin to open. Scions will live set any time after the sap freely circulates, and till the apples are as large as musket balls.

To remove Stains.—Stains, on varnished articles, which are caused by hot water, may be removed by rubbing them with lamp oil, and then with alcohol. Ink stains can be taken out of mahogany, by one tea-spoon full of oil of vitriol mixed with one table-spoon full of water, or by oxalic acid and water. These must be brushed off quickly, and then washed with milk.

WEDNESDAY, APRIL 17, 1844.

THE BACK VOLUME.

All new subscribers who may desire it, can obtain the first volume, neatly bound in boards, at one dollar the volume.

CULTURE OF BROOM CORN.—"A Subscriber," to whom we are much indebted for his valuable communication upon the "*Culture and preparation of Indigo for Market*," in this number, in a postscript to that article, asks:—"Why may not the Broom-Corn be an object worthy the attention of Southern Agriculturists? Of this, there are several varieties, (species.) The *Sorghum saccharatum*, is cultivated at the North, not only as an article for manufacture, but for the seed, which is said to be a nutritious food for stock, when ground and mixed with the meal of the Indian Corn. Its comparative weight with the Maize, is nearly as four to five. There is no doubt it might be profitably cultivated at the South. Must we be dependent upon our Northern brethren, for so simple an article as a Broom? We should do our own sweeping upon our own terms; and without paying a stiver for a clean and comfortable floor. Whilst we are paying heavy duties to protect *their* interests, let us attend to another duty, which we owe to ourselves—to protect *our* interests by industry and economy; and we shall pay them less, and enjoy the products of our own labor."

In reply, we beg leave to remark that, in our opinion, there is no good reason why Broom-Corn is not worthy the attention of Southern planters. For, in addition to its value for food, the manufacture of brooms from the stalks affords to a considerable class of laborers at the North and East, profitable employment, in the production of an article of necessary consumption, and of which the South is a large consumer. We have often been astonished at this, but we have been so long accustomed to the culture of Cotton and Corn, while we submit to be dependent upon other sections of the Union for almost every thing else we consume, that we seem not only to be ignorant of the advantages of independence, but wholly indifferent as to the means to attain that position. It is true, there is no manufactory of brooms at the South, of which we have any knowledge; and it is even doubtful, if there were several, whether our planters would not consider it "*too small a business*" to cultivate Broom-Corn for their consumption. It is, however, equally true, that while we are large consumers of the article, we are entirely dependent, for them, upon the North and East—enjoying, too, a climate and soil equally well adapted to their culture, and possessing all the advantages for manufacturing.

FEEDING STOCK.

We commend to the careful consideration of our readers, the following letter on this interesting subject. The lavish use of provender in Kentucky, to which Mr. Lewis alludes, and the necessity for economy in the feeeding of stock of every description, applies with great truth to almost all our planters, who are all stock-raisers to a greater or less extent. They, as well as their brethren of Kentucky, have much to learn from the Eastern farmers, as well in this department of domestic economy, as in all the others to which Mr. L. refers.

From the Southern Planter.

LEANGOLLEN, KY., February 28, 1844.

C. T. BOTTS, ESQ.:

Dear Sir—Permit me to return you my sincere thanks, for sending to me two numbers, (the January and February,) of your agricultural periodical, "The Southern Planter." The people are more benefited, their real interests more advanced, their rational and moral powers more healthfully secured, by one such paper, than by all the political and polemical slang-whanging journals that ever were or ever will be expectorated on them. Agriculture is gradually ceasing to be a mere empirical practice. It is rightly becoming an enlightened art, founded on science, and the time will surely come when the treatment of land, crops, stock, &c., will be founded on well ascertained and established principles, deduced from facts. In feeding stock, we err widely, and commit great waste of food. If we observe the horse, cow and sheep, for instance, when permitted, unrestrained, to gather their own food in spring and summer, we may learn truths, which we should apply to them when dependent on us for their supplies. We cannot doubt that their instincts direct them aright as to quantity and quality; for we see that they grow and thrive where there is an abundance of those plants which they select. The green leaves and seeds, both immature and ripe, constitute their food. In these the larger portion is water; yet they drink and also seek salt-licks. The bodies of the mammalia, including man, contain seventy-five per cent. of water; yet, we do not attempt to assimilate their food to green grass, but feed them on dry hay or straw, and dry seeds. And the consequence is, that they do not grow or fatten so well, unless such quantities are given that a great portion passes undigested; irritating the alimentary canal, and often causing disease. Besides, these animals will not eat enough *dry* hay or straw to give the proper degree of distension to the stomach for digestion and assimilation, without the danger of producing inflammation or other injurious effects, when expanded in the stomach by *heat* and *moisture*. This should be done at least by the latter before it is eaten. Much of the *hard, dry* grain, given to these animals, so different in its condition from that which they gather for themselves, is neither sufficiently masticated nor moistened on entering the stomach, to produce its normal effect. One half the usual quantity, properly prepared, would benefit them more, and all the rest would be saved. Just so much *nutritive matter* as is contained in the quantity of good rich grass, eaten by one of these animals in a day, should be diffused in as much finely chopped hay, straw or fodder, as the animal will eat in the same time, sufficiently moistened some hours before it is given, (the longer the better, provided that it does not ferment or turn sour.) I do not confine the beneficial effects of this method to the mere mechanical effect of the water in softening and distending the mass. The most important effect, I believe, is produced on the elements of the water itself; one of which enters largely into the composition of flesh and fat, (hydrogen.) We know that cows and sheep will thrive when fed on turneps and straw, yet turneps contain 92½ per cent. of water, according to the analysis of Mons. Boussingault, an accurate chemist; and when compared with Indian corn, 138 parts of the latter are equivalent, in nutritive matter, so called, to 1,335 of turneps. The decomposition of water, and the appropriation of its elements, by the organs of nutrition, I believe, to be greatly facilitated by mixing vegetable matter with it: if so, we *gain* one of the important constituents of flesh, fat, &c., from the water. And this is certainly cheaper than to get it from rich, oily seeds, the proceeds of laborious cultivation. This is not a mere conjecture of my own. Count Rumford entertained the same opinion, and so do Drs. Prout and Pereira. (Treatise on Food and Diet by Jonathan Pereira, edited by Chas. A. Lee, New York, 1843, p. 40.) It is well known that gold and silver fishes, and others also, will grow and fatten on water alone. It may be said they obtained their nourishment from *other substanees* contained in the water, and not from the water itself. This would not alter the case, for the water mingled with the food of stock contains also these other substances, while haddock has in its composition 82 per cent. of water; carp, 80.1; and trout, 80.5; according to the authority of Brande and Schlossberger. Now, this greater quantity of water in fishes than enters into the composition of the mammalia, it is fair to attribute to the water itself, on which they seem to live.

The *mill*, the *straw-cutter*, and *water* are, in my opinion, the indispensable auxiliaries of those who would feed their stock in the best manner and most economically. We have mills here which grind up unshelled ears of corn. A slight alteration in the common corn grist mills, adapts them to this purpose, without interfering with their fine meal making use. The eye of the upper stone, instead of being circular, is enlarged on one side, and a removable tube, large enough to admit any ear of corn, is thrust into this side enlargement. Into the lower stone, beneath the end of the tube, two knives are fastened, so that at every revolution of the stone, the ear of corn is swept round over these knives, which slice it up, and then grind it into meal. It is a patent affair, answers admirably, and is added to any common mill for fifteen dollars, patent included. Mr. Robert Wickliffe, of Lexington, has had lately a sort of mill erected, which grinds up oats in the sheaf or corn in the shucks. I have not examined it, but am told that it makes excellent chop, ready for moistening or feeding dry.

So you see, sir, that even in this Elk Horn Paradise of hogs, horses, mules, and corn, we are seeking out and practising more economical methods of feeding stock. You must not suppose, though, that these methods are in general use—far from it; few as yet have adopted them. After the adoption of these, another will follow for cows and hogs. The *cooking* of their food, in which there is certainly great gain.—But *our* onward course in all these matters is greatly retarded by the want of laborers, and the consequent high price paid for every kind of manipulation.

Although we are "*a match*" for the Yankees in horse-swapping, bartering, and stump-speeches, (in the latter, your real *carn-cracker* can beat the world,) yet in machinery, farm fixtures, and the economical application of labor, we have much to learn from them. The cheapness of grain, and the want of a ready market for it, is one cause of its slovenly and lavish use in Kentucky.

JOHN LEWIS.

OKRA—"GUMBO."—T. Affleck, Esq., gives the following mode of preparing this vegetable: "A large mess of okra soup, (called gumbo,) should be served on every plantation at least four days in the week, while the vegetable is in season. The pods are gathered while tender enough to be cut by the thumb nail; cut into thin slices, and with tomatoes, pepper, &c., added to the rations of meat, forms a rich, mucilaginous soup. It is planted (in Mississippi) about the first of March, in drills four feet apart, every two or three feet, if the ground is rich, which it should be."

From the Tennessee Agriculturist.

SMALL FARMS.

Perhaps the greatest mistake in the farming of America, is the practice of attempting to cultivate more land than can be well tilled. This system may be properly styled *surface culture*, and it has been the means of impoverishing more land than any other cause. In the great South-West, as well as in the South-East, thousands and thousands of acres have been worn out, and abandoned to the growth of broom sedge, by this ill directed mode of procedure. It remains no longer doubtful, that a hundred bushels of corn can be grown upon the single acre of ground, and with little more labor in tillage than is required for cultivating an acre that yields but twelve or fifteen bushels. The secret of permanent success in every thing, is to do all well that is attempted. Five acres, well prepared, and well cultivated, will produce at least as much as twenty-five acres on the common exhausting plan. Thus it is obvious, this statement being admitted, that one-fifth of the land now cultivated might, with a different system, produce as much as is at present grown in the country. It is also evident, on the supposition, that agriculture might be made five times more profitable, and assuredly the pleasure and honor of the profession might be signally augmented. *Thorough manuring, deep plowing, good seeds, timely planting, proper rotation of crops, and neat culture*, would work wonders in our Agriculture.

The intellectual enjoyment and real moral of improved husbandry, are not to be overlooked. In consequence of the loveliness of a garden, the abode of the just in the next world is denominated paradise, a garden, or a heaven, and when it is remembered the whole farm can be made as interesting as a finely cultivated garden, there is something truly enchanting in the farmer's profession. A rich and well tilled field affords the most lovely scenes; but a poor field, with an indifferent crop, is certainly discouraging.—Time will be when this subject will be duly appreciated with the farming world. T. F.

From the Albany Cultivator.

CULTURE OF COTTON IN GEORGIA.

Messrs. Gaylord & Tucker—About the middle of January, 1843, I moved to this place, which is considered, by the neighbors, the poorest plantation in the neighborhood, it having been in constant cultivation for upwards of 20 years, without rest or manure. It is poor pine land, but lies almost level, and is easy to cultivate. I very soon became a subscriber for your valuable Cultivator, and noticing Dr Cloud's improved plan of raising cotton, I was induced to try one acre. Not having the proper kind of compost, I used for broadcast raw stable manure, and in each hill half a gallon of such as I could gather in the barn-yard, and treated it throughout after the Dr.'s plan. From insects and other causes, there was 568 missing hills; from this acre I gathered 1,428 lbs. seed cotton. In August, we had a slight drouth; the cotton turned yellow, and cast a great many of the balls and squares: this, I think, was occasioned by the raw stable manure.

I also planted six acres four and a half feet by three, and put in each hill half a gallon of barn-yard manure, not having any for broadcast cultivation, nearly the same as the above; the yield was above a thousand pounds per acre. The balance of my cotton was planted in the ordinary way without manure, 3½ feet by 12 inches. From this I gathered 515 lbs. I think there was no difference in the quality of the land previous to planting. I am fully satisfied, if I had used the proper kind of compost, instead of the unrotted stable manure, and a full stand, I would have had 3,000 lbs instead of 1,428. I am so much pleased with the Dr.'s plan, that I expect hereafter to practice it as far as my ability will afford; and if I could obtain some of Dr. Cloud's improved cotton seed, I flatter myself that in a few years I would be able to astonish some of our cotton planters that adhere so strenuously to the old system of kill, cripple and go ahead. J. D. H.

Houston County, Ga., Jan. 30th, 1844.

From the London Punch.

EXQUISITE IRONY—POVERTY.

As poverty is the lowest, so it is the most impudent of the whole family of vices. Pride is a gentlemanly failing, and sins sweetly and respectably. It smells of civet, and turning its varnished cheek to the sun, walks abroad in purple and fine linen. Nay, it rides in a coach and four: and, in hours of penitential castigation, bolts itself in a pew of best upholstery, and in a fit of humility, lasting at least a couple of hours, calls itself a miserable sinner. Hence, pride at its worst has its good graces. At all events, it never offends that extraordinary abstraction, public decency; for though we hear much about it, it is, nevertheless, sometimes as difficult to discover as a city police man. No, pride, being a vice that is well to do in the world, may be called respectable. Pride keeps a barouche! Drunkenness may, or may not, be respectable, according to its education. When we say education, we mean the peculiar bottle it studies. For the drunkenness that ponders over champagne, is a very different vice to the drunkenness that takes libations from pewter quarterns. Arrogance is also a vice that may have its laudation. It rarely consorts with beggars; but is, at least among that suspicious class, the respectable. Covetousness and avarice are called vices; for our part, we have ever thought them among the noblest virtues. And so, indeed, in their heart of hearts do nine men out of ten think them. And this is what they do; they give them hard names, and then, to make amends for their seeming harshness, take them to their bosoms, in the same way that a foolish mother, when she sees her baby doing all sorts of household misdemeanors, cries, "you little wretch," and then catches the child in her arms and covers it with kisses. There are a few other vices that may all of them be turned into passable virtues, if found in good company. Lust, cruelty, selfishness, each and all of these may have a pretty alias—another thrilling, musical name for the long ears of biped thistle-eaters. But there is one vice, and that vice is poverty, which all men declare to be infamous, incorrigible, incapable of amendment; a leper, a wretch, a monster, to be confined in cabins and cellars, or sent, like a scapegoat, into the howling wilderness.

A Hint to Young Married Women.—Never tell your own affairs to any old gossiping housewife. Let her appear ever so specious, so sincere, so candid; be sure to avoid her, and keep your own counsel: for the only reason she has for prying into your secrets, for insinuating herself into your confidence, is to learn that some error, some deformity exists in your family, on which she may feast with secret delight for a luxurious moment, and then share some of the choicest bits with her neighbors. Treasure this up, and act upon it, and it will save you years of mortification, if not of heart-burning and sorrow.

Scours in Calves.—Lovett Peters, Esq., in a communication in the N. E. Farmer, says he has tried most of the remedies recommended for this disease, but has found the following to succeed better than any other. "It is a half a pint of cider, and as much blood, taken from the calve's neck, shook well together, and given it with a bottle."

Blind Teeth.—John Johnston, of Geneva, says he has had much experience with blind teeth. He states that when they come out in such a way that the grinders of the under jaw press on them, the eyes are always injuriously affected. The blind teeth should always be taken out as soon as they make their appearance.

Warts on Cow's Teats.—Cows are sometimes troublesome about being milked, in consequence of their teats being sore from warts. The Mass. Ploughman recommends rubbing the teats with the juice of milk-weed, and also the application of a poultice made of grated carrot. Both may be good; at any rate they will do no hurt, but the best plan to obviate this trouble is, to cut off the warts with sharp scissors, when the cows are dry. Not much blood will flow, and the teats will heal in a few days.

Editorial Remark.—"How seldom it happens," said one friend to another, "that we find editors who are bred to the business." "Very," replied the other, "and have *you* not remarked how seldom the business is *bread* to the editors."

CONTENTS OF THIS NUMBER.

	PAGE.
Agricultural Papers, the effects of	60
Broom Corn,	63
Cotton, culture of in Georgia,	64
Farms, Small	64
Grafting Wax,	62
Horticulture, Elements of	58
Indigo, Culture of and Preparation for Market,	57
Irony,	64
Okra,	63
Swiney, Cure of	58
Suggestions to Cotton Planters,	62
Stains, to remove	62
Stock, Feeding	63
Scours in Calves,	64
Teeth, Blind	64
Young Married Ladies,	64

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August 30. 18-tf

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SOUTHERN CULTIVATOR.

VOL. II. AUGUSTA, GA., MAY 1, 1844. No. 9.

AN ADDRESS,

Pronounced before the Barbour County Agricultural Society, and the Public, on the Anniversary of the Society, being the Anniversary of the Birth-Day of Washington—by JOHN L. HUNTER.

FELLOW CITIZENS:

We are assembled to celebrate the Anniversary of the Barbour County Agricultural Society, on the very spot which, but a few years since, was the residence of the Indian savage. The land around us, a vast wilderness—devoted exclusively, save a few insignificant corn-patches to his hunting grounds—now blooming with all the beauty and loveliness of Civilization and Agricultural refinement.

This rich and beautiful country, in the possession of an agricultural people, is going on to fulfil its destiny, and to carry out the will of its Creator—who makes nothing in vain—mercifully consulting, in all his arrangements, the happiness of his creatures.

Whatever may be said of other useful and honorable employments, Agriculture stands pre-eminent. Not only administering to the wants, and contributing to the prosperity of the community, but it is the basis of civil society.

"Hominum generi universo cultura agrorum saluta wis."

The cultivation of the Earth has ever, from the earliest period of the world, been held in the highest estimation, and has been the favorite pursuit of the wisest and best of men—and the field of the farmer has frequently furnished the field of battle with men on whom their country could, with safety, rely in the darkest days of distress and danger. Need I cite you to the farmer of Mount Vernon, who lives in the affections of his countrymen, and wants no monument to perpetuate his fame, his epitaph being inscribed in indelible characters on the heart of every American patriot.

Indeed, the cultivation of the Earth is most congenial to the lofty feelings and sentiments of our nature; is well calculated to restrain and subdue the passions, and exhilerate the mind, and promote the health, virtue, and benevolence of Man. It brings him in closer connexion with his Creator; makes him feel more sensibly his dependence upon *him* who gives the early and the latter rain, and who, by his kind interposition, blesses his industry with, to us, miraculous results, and fills his heart with fervent graiitude.

When man was made most pure, and God had blessed his work, a garden was the residence assigned him—where, but for the tempter, he might have continued to enjoy undefiled innocence, and uninterrupted happiness.

The American farmer has abundant inducements to stimulate him to enterprise and improvement. He lives in a free and liberal government, under wise and wholesome laws of his own enactment—is the lord of the soil he cultivates—knows no master but his own will; how important that will should be enlightened and directed by the rays of science now dawning on the world; how encouraging to make those improvements for his own comfort and independence, and for the happiness of those who are to succeed him.

And the farmer in our own section, in comparison wiih other portions of our common country, possesses no unenviable a situation; blest, as he is, with a mild and genial climate, adapted to the richest staple of the world, with a rich and virgin soil, and abundant materials round him to preserve its fertility.

If the farmer would derive the greatest pleasure, as well as the greatest profit from his employment, let him use due diligence in seeking the advantages of science. He must not only be a practical, but a scientific farmer. Not that he should be a philosopher deeply versed in the sciences, but that he should be conversant with those principles that are particularly connected with his soil, its cultivation, and improvement.

And this is greatly facilitated and advanced by the association of farmers, who have the pleasure of meeting together, to interchange sentiments, compare notes, and explain experiments, which will have the happiest effect to elicit investigation, promote an useful and honorable emulation, and arouse the talent and energy of our country.

With all that is said, says an English writer, on the advantages that have been derived from the Highland Society, which may be expected to be derived from the Royal English Society, we cordially and entirely agree; and we here repeat our firm conviction, that if Agriculture, as a science, is destined to experience a general and thorough revival, as we think it is, it will be mainly owing to the establishment of such an important and highly respectable an institution, as the Royal Agricultural Society—supported, as it is, by a host of able and practical writers, aided by such auxiliaries as the useful institutions, the Provincial Farmer's Clubs—the discussions at which are, perhaps, more than any thing else, calculated to rouse and keep alive a spirit of enquiry, and a thirst after knowledge. What may not be expected?*

And allow me to add, if the State Agricultural Society of Alabama, with its useful auxiliaries, the County Societies, met with proper encouragement and patronage from the people and their Legislatures, what might not be expected? The blessings of a high and improved state of cultivation, and a spirit of enquiry, and a thirst after knowledge, that would call forth the energies of the country and lead to a developement of her resources: for, let it be remembered that Alabama is not only a cotton growing country, but abounds in mines of gold and quarries of marble,† and coal.

Such enquiry and investigation might lead to a diversion of labor from cotton, which would diminish the amount of production and enhance the price, giving profitable employment not only to the cotton grower, but to those employed in the rich mines and quarries of the State.

Alabama, important as she is in the confederacy, should not be devoid of an honorable pride and emulation, as to fall and remain in the rear of other States, in the march of improvement.

Improvement of the soil is rapidly progressing—it has commenced where the land was most valuable and crowded with population; where necessity, the first law of nature, urged and stimulated its inhabitants to improvement to avoid starvation, or an humble dependence upon other countries for the necessaries and comforts of life. In Europe, the land that produced but a few bushels, is now made to quadruple its former productions. The soil that once but sparingly sustained a small population, is now made to supply bountifully a greatly increased population. It does appear the older the land grows the greater its production. And this all the result of science, skill, and good management: says an agricultural writer, "herein consists the pre-eminent superiority of modern agriculture, that under the disadvantages of continued culture, the soil is thus capable of maintaining its fertility." In the old States, the planters have come to the conclusion, from their various experiments on manures, that it is easier and more profitable to improve a partially exhausted soil, than to clear and put into cultivation new land; and lands which, but a few years ago, were regarded as worn out and worthless, are now estimated at a high value.

Long continued cultivation, particularly in Cotton, will, as experience teaches us, exhaust the richest and best soils. To preserve its fertility, ought to be the earnest and active desire of every farmer who would avoid a sacrifice of his property, with all expense, inconvenience and privations of emigration. Happily for us, we can now start with a soil fresh and productive, which will require less labor and expense to improve it, than to wait until it is exhausted or worn out; and we are blessed with abundant materials easily procured for that purpose. To accomplish so desirable an end, the farmer should turn his attention to a rotation of crops, resting and manuring his fields. Nature, tired of one kind of growth, shows its strength and vigor in producing another kind. The soil that bore the Oak and Hickory, when cleared and cultivated, and then suffered to remain at rest, grows up in Pines—nature teaching man a lesson for his improvement in the rotation of his crops. Too long a continuation in succession of the same plants upon a soil, is said to poison it as far as that plant is concerned, by its final exudation, as well as its drawing from, and exhausting the soil of those grasses that the plant most particularly feeds upon or absorbs—whereas the soil would be fresh and productive for another set of plants.

It is hardly necessary here, to observe the propriety of an alternate growth of fibrous and tap-rooted plants—the former deriving their food from the surface, and the latter from a greater depth. To the former class belong our valuable Indian Corn, and to the latter our Cotton plant. Cotton always shows the benefit of a change from Corn, and Corn succeeding Cotton shows a still greater benefit, as though the land had been previously manured. In our rich bottom land repeated successions of a Corn crop poisons the soil with the insect called the bill-bug, which saps the young and tender corn plant, and renders it difficult, and often impossible to set the crop. A change to cotton is destructive of this insect, and restores the land to its valuable property of again making an abundant yield.

To rest a partially exhausted soil, protecting it by enclosure from the grazing of animals never fails to produce the most fertilizing effects, most particularly in the culture of the cotton plant. Cotton, from our constant observation and experience, flourishes best upon a rested soil. It would, therefore, be greatly to the interest of the planter, to divide his arable or planting land, so as to have a portion of it at rest and alternating with the balance, and plowing in such vegetable matter, as has been accumulating on

*Great improvement in Agriculture.

†The speaker was presented with a beautiful specimen of marble from Talladega county. Coal used in Tuscaloosa.

the former in time for decomposition—for, if not in time, the crude vegetable matter will produce by fermentation a vacuum and heat which will give disease to the young and tender cotton plant.

Some agricultural philosophers of the present day, upon the new doctrine of the radical fecal exudation of plants, would explode the necessity of rest. They contend that with a judicious rotation, and the application of manure, land wants no rest from cultivation, and will not tire or exhaust. But let it be remembered that the culture of cotton differs materially from the grain* or corn crop, where that doctrine is promulgated.

The culture of cotton is one of long continuance, requiring numerous plowings and hoeings to bring it to maturity, constantly exposing new surfaces to the action of the sun. On the other hand, their grain or corn crop is generally broad-cast, and requires but little or no cultivation, after planting it, to bring it to perfection. I have known a sandy soil, notwithstanding a rotation from cotton to corn, become too porous for cotton, from long cultivation so as to admit the sun, and excessive moisture to the roots of the cotton plant, and rest for consolidation and a closer adhesion of the particles of the soil was considered the only remedy. It may be said a loose, sandy soil, was not adapted to the culture of cotton, but our experience teaches us that a rich, sandy soil, is perhaps the most suitable land for that culture.

In resting land much exhausted, it is very desirable to assist it in getting early a vegetable coat, not only to protect it from the sun, but also to add to its vegetable and gaseous accumulation. For this purpose, the Pea plant cannot be too highly recommended. First, it is well adapted to our climate and country, and grows upon land too poor to produce any other plant to advantage. Second, it does not exhaust but enriches the soil; it has small roots and large leaves, drawing more food from the atmosphere than the soil, and affords a covering from the sun. Third, it may be sown upon the land when the planter lays by his crop, an interval between that and harvest time; and as it is of rapid growth, it has time to mature.

On the subject of manures, allow me to impress upon you the advantages of marl. You truly reside in a marl district. It is in this section abundant on the rivers, creeks and branches, and from its ingredients, when it is composed in due proportions of lime, clay, animal, and vegetable matter, and marine substances, in a state of decomposition, is a rich manure as the production of the good marl soil demonstrates. But some marl has an excess of lime or silex, and will not make a good manure, without making a compost to supply its defects. Neither silex nor lime improve of itself, or conjointly a soil farther than the silex, to make it more open and less retentive of moisture, and the lime to act more as an absorbent and a stimulant to vegetable matter in the soil. Upon a worn out and exhausted soil, which is the escape in the way of gas of its vegetable matter, lime would form a most important ingredient, united with vegetable matter in a compost.

The cotton planter has a great abundance of cotton seed, which, from its oily nature, can be converted into the richest manure.

The cotton seed, if suffered to be exposed to the action of the sun and rains, looses by evaporation of its gases more than half of its value; if sheltered, would hold its germinating power, and would not only be troublesome to the growing crop, but loose much of its strength and valuable qualities. To prevent these effects, it readily occurs to the mind of an observant farmer, that it should be covered with a thick coat of lime or marl, or with a vegetable mould or earth, obtained from the branches, ponds or low grounds, most accessible and convenient, which will not only protect it from evaporation, but make important additions to it.

Professor Liebeg, speaking of volatile parties of manure, in relation to stable manure, says what will with equal propriety apply to the subject under consideration:

"The ammonia emitted from stables is always a combination with carbonic acid, carbonate of ammonia, and sulphate of lime, cannot be brought together at common temperatures without mutual decomposition. The ammonia enters into combination with the sulphuric acid and the carbonic acid with the lime; forming compounds which are not volatile, and consequently destitute of all smell. Now if we strew the floors of our stables from time to time with lime, they will loose all their offensive smell, and none of the ammonia which is formed can be lost, but will be retained in a condition serviceable as manure."

"The manure," says a writer, "produced by the farmer's own stock, naturally the most valuable, is yet the most mismanaged of all the fertilizers to which he has access. This bad management has been not alone chargeable to modern cultivators; for, from the earliest period, when man began to cultivate the earth, there is evidence that the manure of his cattle has been generally wasted, often neglected, and commonly mismanaged." Cato, the Roman, in his agricultural writings, gives admonitions to his brother farmers on this subject—he says, "study to have a large dung hill, keep your compost carefully,"—meaning, I presume, that it should be protected from waste and evaporation, by the enclosure and covering.

The atmosphere abounds with the finest and richest manuring particles provided by a kind Providence in a gaseous state for the use of plants, which descend upon the earth in the way of dew and rain. "Several chemists have proved the existence of saline matters and organic substances in the air. The falling rain carries down with it salts of ammonia, of lime, and a flocky organic matter floating in the air." Some plants absorb largely their food from the atmosphere, some from air and water, others almost exclusively from the earth, whilst all plants in general, from all these sources. By a wise economy of nature, plants absorb most freely those gases that are deleterious and destructive to the health and life of man, and emit most freely those gases that promote his health and energy. Carbonic gas derived from the atmosphere, is said to be absorbed by the leaves of plants; and nitrogen from the same source enters into the soil, and with other combinations forms ammonia, which is taken up by the roots of plants, but which is so volatile as easily to be drawn up into the atmosphere by the operation of the sun, and dispersed by the air and wind.—It should, therefore, be the study of the farmer, so to prepare and cultivate his grounds, as to preserve its attractive and retentive power for those atmospheric gases, and to give a healthy growth and action to the plants, to attract and absorb them also.

And this can be effectually done by frequent working.

Some agricultural philosophers, so infatuated with the idea of atmospheric manure, seem to think but little else is required, to preserve the fertility of a well constituted soil, than to keep it in a fit state to receive, absorb, and retain what gaseous matter may descend upon it. Of all plants the cotton is the most dependent for its growth and healthy action, as well as for the length, strength, and fineness of its wool, on the influence of the atmosphere. The sea-island cotton is well known to degenerate as you leave the sea-board, and thirty or forty miles beyond that region, although the climate and length of season may be favorable, the atmosphere will not admit of its successful cultivation, and a coarser cotton has to be substituted, commonly called upland.

We cannot refrain from noticing the prospectus in a valuable periodical published at Augusta, for the sale of a patent to make manure. The ingenious patentee, Mr. Bommer, proposes to furnish the secret and system for making manure for a garden, for the sum of ten dollars; and for a larger quantity of ground, a proportionate increase of compensation. I presume the secret lies in the use and application of chemical agents to facilitate the decomposition of vegetable or woody matter, and thereby convert raw and crude matter into wholesome and valuable manure. Matter must, after all, be the basis of all manure, and he that will not procure that matter, might as well look for manure, with as little hope of prospect, as the farmer for a crop, who neither sows the ground, nor bestows cultivation upon it. I would not, however, be understood as speaking disparagingly of any process by chemical combinations, to facilitate the conversion of crude, and otherwise indigestible substances, into a fit and suitable pabulum for plants. For instance, sulphuric acid sprinkled on calcareous substances, would form sulphate of lime, a valuable manure. So might be found other chemical agents to convert silicious or other substances, by fermentation into manure and hasten decomposition, which would tire the patience, and disappoint the expectations of the farmer, to wait for the slow process of unassisted nature.

In just referring to atmospheric manure, brings me to speak of, and to impress on you, the advantages of fall ploughing, usually denominated flushing of land, before immediately preparing it for the reception of the seed. It has, no doubt, struck your observation, as it has mine, the great benefits derived from it. It renders the land more easily managed during the growing crop, and it pulverizes clay or stiff soil by exposing its surface to the action of the frost, which, in many seasons during the crop, could not be pulverized so as to admit the setting of a crop, or the growing of the young and tender plant.

The soil, as has been already observed, derives much of its productive property from the atmosphere. Constantly to expose new surfaces to the action of the atmosphere, and to keep it in a soft and spongy state, is to give it more attractive power for the gaseous matter floating in the air, and more absorbent power to retain it when dropped upon it. For instance, "much greater quantity of carbonic gas will be absorbed by a given surface of earth, if the earth is frequently stirred, than if it were to remain with a single saturated surface;" and with a hard and imporous surface, the gases would alight upon it to be extracted and taken up by the morning sun; whereas, otherwise, they would be incorporated with the earth, and form combinations to enrich it.

Fall ploughing is very serviceable in aiding the draining of clay or stiff soils, as well as to render sandy or silicious soils subject to drought, more retentive of moisture. It renders the land less troubled with grass and noxious weeds, by more effectually burying their seeds from the action of the oxygen in the atmosphere, so essential to their power of germination. It also largely contributes to the destruction of insects. Insects more particularly, that intest cotton of late, may be attributed chiefly to the sickly or filthy condition of the plant, arising from the poverty or wetness of the soil—its exhaustion for that particular plant, by long succession of cropping, or by negligent management during the season, and the influence of the atmosphere acting upon these causes. It is true, and experience teaches us, that a particular state of the atmosphere is more fruitful in generating insects, but experience has also shown and proven, that a soil worn out and exhausted or badly prepared, and negligently cultivated, is at all times, and on all occasions, much more subject to be infested with them.

Upon all lands, more particularly those which have been at rest or recently cultivated in corn, there will always be an accumulation of grass and weeds. To turn them under by fall ploughing, allows time for their decomposition; which, if neglected until for immediate preparation for planting, such vegetable matter would not have time to rot, and in its crude state would not only be indigestible to plants, but poisonous to them. Hence, the awful necessity of burning off the trash to prevent disease, more particular-

*In England used for wheat.

* It should be Sulphate of lime, common lime

ly to cotton. I remember noticing the great productiveness of the bottom land of a neighboring planter on our river, and in conversation with his intelligent Overseer,* recollect his attributing his success mainly to the advantages of good fall ploughing.

Allow me to bring to your notice some of the obstructions to the improvement of our lands. First—temporary fencing for enclosing our fields, which wastes much valuable time in repairing them and making them over; the necessity for which so often occurs, at a time when the planter should be collecting and preparing his manure, and his fields for planting. Second—planting too large a cotton crop to the hand. One acre well prepared, and skilfully and diligently managed, will produce more than two acres otherwise. Besides, it will be more easily picked, the picker having to go over less ground, as the bolls will grow larger and thicker. With a moderate proportion of cotton in cultivation, in a fair season, the planter can produce as much cotton as he can conveniently and comfortably save and harvest, and he will be enabled to make a larger and more bountiful provision crop, to the comfort of his slaves and stock; and he will not be driven into the dead of winter, to run over his scattering cotton, when the weather is generally inclement and cold, and he can find more suitable employment of his hands to more suitable purposes. Third—the neglect of draining his lands in low places. Water may not always appear on the surface, but when not drained, if the season is not excessively dry, water will lodge under the suriace destructive to vegetation, in those spots, and aroun' them. Wet lands are unfit for cultivation, and the cotton plant particularly requires a dry soil.

In winding up, feltow citizen farmers, for I have already trespassed too long on your patience, let us come to the conclusion of the whole matter. Let the farmer study to have a large compost, give due diligence to manuring and preparing his lands; let him carefully put his seed into the ground, and let him take an early start with the young and tender plant, before the grass and weeds begin to rise, and then let him look up to his Heavenly Father, trusting in his promises to reward skill and industry, and bow with submission to his will. Although the race may not always be to the swift, nor the battle to the strong, diligent perseverance in his business will not fail to meet its merited reward, and eventually to crown his labors with success.

Gentlemen of the Agricultural Society—Allow me to congratulate you on the interest manifested in our community, on the important subject of Agriculture—the result of your persevering efforts—which, while they redound to your credit, will, I trust, afford the farmers and planters in our county increased means of comfort and independence.

Could our beloved Washington, the anniversary of whose birth-day is so appropriately the Anniversary of your Society, but witness the great improvements in that soil which his valor defended, what would be his feelings? For you all know he was a scientific and practical farmer, and took great delight in the business of his farm, and, like Cincinnatus, always regretted to leave it for public employments, although always obedient to the call of his country, and ever ready to sacrifice his private and domestic happiness to the good of his country. Unlike the great Captain of the age, who so overwhelmed with a boundless ambition, and insatiable passion for glory, as to forget the rights of men and nations; who displayed greater mental power than any man who ever drew a sword or wielded a sceptre—who disposed of Crowns and Kings, as children with their toys—who "had given him the necks of his enemies, and the hearts of his subjects"—who threatened and aspired with glory to become the world's conqueror and master. Our Washington, possessing no ordinary abilities, with the best practical good sense, and the most exalted virtue, stands pre-eminently distinguished over the great Napoleon—for the honesty of his intentions, the purity of his motives, the sublimity of his patriotism.

"His feelings—thoughts—and acts united ran
To one grand point—the happiness of man.
No blemish stained the escutcheon which he bore,
If he loved glory—he loved virtue more."

When the French Revolution closed, Napoleon, from being the Republican First Consul, assumes the Royal purple, and with great pageantry and show, is crowned *Emperor*.

When the American Revolution was closed, Washington retires from the head of the army to his farm, with the benedictions of a grateful people; the one was distracted by the cares of arbitrary Government, and aspirations for universal empire—whilst the other was devoted to rural pursuits, cultivating those finer sensibilities of the soul. Napoleon seemed commissioned by Providence a scourge to his race; whilst a Washington, a blessing to his country and mankind.

Let us ever bear in grateful remembrance the Farmer of Mount Vernon—the Father of his Country—by endeavoring to imitate his example as a *farmer* and *patriot*.

*Mr. Crow at the plantation of Preston & Nellums.

From the Mississippi Valley Farmer.

THE PRODUCTIVE POWERS OF NATURE.

The powers of nature to create vegetable productions appear never to diminish; the process goes on year after year with increasing energy, and brings forth an increase of vegetable matter to be again decomposed and returned to the soil. This is the natural process by which the decomposing vegetable matter which we find in the soil is formed; and there has been a continual succession of production, decay, and reproduction, of vegetable matter, going on ever since nature first sprung into existence, producing vegetables which, when dead, are decomposed into the elements of which they were originally formed.

No loss is sustained by decomposition of vegetable or animal matter in the soil; all is reduced to the first elements of plants, which give fresh energy to vegetation by again entering into vegetable composition.

Thus, the process of the growth and decay of vegetable matter goes on in a continual succession, and the decay of one crop becomes the nourishment of the next.

When nature is left to herself, the accumulation of decomposing vegetable matter on the surface becomes great; and if the soil is not possessed of the property of hastening their decay, the vegetable matter is merely increased on the soil, without adding to its productive powers.

On a careful examination, we think, it will be found that the production of vegetables never exhausts any soil; the yearly growth of grass, with its decay, adds yearly to its productiveness; and even a plentiful crop of woods, when allowed to decay on the land which produced them, has the same effect; and thus it is that land, which has been worn out by cross chopping, is, by slovenly farmers, left for nature to improve.

When the natural pasture is consumed by stock, it is converted into animal food for man; and the excrement of the stock being left on the soil, forms a rich decomposing animal manure, which gives to the soil increased energy to reproduce an increase of vegetable food for an additional quantity of stock.

Pasture land is full of vegetable fibre, from the surface down as low as the roots of plants descend. Some are the recent roots of grasses, others are those of every stage of decomposition. In arable land, scarcely any vegetable fibre is to be found; this circumstance should teach us, that to form a good pasture, we should fill the soil with vegetable fibre as a manure, where we convert arable into pasture land.

The very small proportion of vegetable matter which is contained in the most productive arable soils, would almost seem to indicate that their richness does not depend on the decomposing vegetable matter, but on something else; for, if all the straw or refuse of the crops it produced was returned to it after it had passed through the stomach of some animal, this would scarcely be equal to one-third of what the earth produced.

A judicious succession of crops, and a profitable consumption of the produce by sheep on the ground, returned to the soil such a quantity of manure as to give an additional means of increasing its productiveness.

"Water is necessary to the growth of plants. It is essential to the juices or extract of vegetable matter which they contain; and unless the soil, by means of commutation, be fitted to retain the quantity of water requisite to produce those juices, the addition of manure will be useless. Manure is ineffectual towards vegetation until it becomes soluble in water; and it would even remain useless in a state of solution if it so absorbed the water as entirely to exclude the air; for, in that case, the fibres or mouths of the plants would not be able to perform their functions, and they would soon drop off by decay."—179, Stewaid.

It is necessary that the animal and vegetable matter in the soil should have this decomposing disposition, and the soil have it in proportion to the proper admixture of the materials of which it is composed.

A certain degree of heat, the influence of the atmosphere and water, are necessary to carry on the decomposition of animal and vegetable matter in the soil. The best constituted soil, therefore, has the power of imbibing, retaining, and giving up to the plants a proper degree of heat, air, and moisture. When the atmosphere is warm, moist and sultry, vegetable life is in the greatest vigor, which would indicate these to be necessary to vegetable life, if not the very principles on which it depends.

Soil should not only have an affinity for the moisture of the atmosphere, but it should also have the property of readily transmitting it to the vegetables which grow in it.

The soil, therefore, which it is best adapted for retaining and transmitting, in all circumstances of wet and dry weather, the necessary quantity of moisture to growing plants, may be reckoned best and most productive.

If we impart to any soil that which induces vegetation, we improve it, and increase its productiveness; but if we in any way withdraw from it that which tends to produce vegetation, we injure it, and make it sterile. Barrenness in soil is produced when the component parts of it are so firmly united, that air, water, and the influence of the sun, cannot enter into combination with it. When a soil is pure clay, it is sterile and worthless, and so is that which is pure sand. The former resists effectually the enriching influence of the rains and dews, which merely fall on its surface, and either run off or lie there, without penetrating into it. The sun and wind also may beat on it and blow over it, but they can never penetrate its mass to awaken up the dormant energy that lies within; they only have the effect, by their repeated attacks, to dry harden the surface, crack it into irregular portions, and more firmly to lock up any languid and dormant principles of vegetable life that may be within the mass. The latter is so porous and loose in its texture, that the rain and dews no sooner fall on it, than they pass through it rapidly, like water through a sieve; the rays of the sun and the wind evaporate and dry up the last particles that remain, producing only a transitory effect on vegetation, and because they have no regular supply of moisture, the plants soon wither and decay.

The energies of the soil are frequently held in bondage by some pernicious quality inherent in it, or imparted to it, which, if neutralized or extracted, the soil would become productive.

When light, sandy, and vegetable soils, are artificially made lighter, they possess little of the principles of vegetation. The mechanical disposition of a clayey soil is also deranged by improper treatment, such as trampling or ploughing it in wet weather; and although the soil has a full supply of animal and vegetable manure in it, yet the mechanical derangemen

so totally locks up all its energies, that the fermentation so necessary is altogether stopped, and complete barrenness is the result.

This we have frequently observed to occur from land being trampled by sheep, in eating off turneps, from strong clay soil during wet weather, in the early part of the spring.

They convert the surface into a complete puddle, and when it becomes dry, the parts composing the soil are so closely united together, that it is like bricks dried for the kiln, and is entirely unfit for the production of plants. It is evident that the causes of sterility in these soils are opposed to each other; each, therefore, will require a mode of treatment peculiar to its case. The light, sandy, and vegetable soils, that are too friable, must be artificially rendered more firm; and the too tenacious clay soils must be made artificially friable, and kept so, and be pulverized and mechanically altered before we can expect them to become productive. It is evident, if these two soils could be mixed together, the mixture, with a proper quantity of vegetable and animal manure, would make a good productive soil.

From the New England Farmer.

ON THE RIGHT USE OF MANURE.

Mr. Editor—After all the conflicting opinions about the depth to which manures should be buried, if covered at all; and after all the conflicting opinions about the *time when* manures should be buried, permit me to say that, according to my experience, the depth to which manures are covered, and the degree of rottenness which manures should attain before they are used, should be varied according to a number of different circumstances, as:

1st. The difference in the component parts o the manures.

2d. The difference in the kinds of soil and subsoil to which they are applied.

3d. The difference in the kinds of crops which it is designed should be benefitted by the manure; and

4th. The difference in the time when it is designed that the manure should give forth its powers for the benefit of the crop.

1st. There is very considerable difference in the component parts of manure. Some are volatile, some are fixed. All volatile manures should either be composted, or else, if it is practicable, they should be covered as soon as they are spread, in order to prevent them from evaporating ahd flying into the atmosphere when used. But if the volatile parts of the manure are composted with peat, or other substances which are retentive of moisture; or if, according to the views of Liebig, the volatile parts are fixed by strong acids, or by the sulphate of lime, they will not then require so deep a covering as if they were not thus composted or deprived of their volatility. Composted manures do not require to be ploughed in as deep as those which are not composted. And where farmers cultivate damp soils and compost their stable and barn yard manures with peat or swamp-mud, we are assured that they sometimes succeed pretty well in the cultivation of grass, corn, wheat and rye, by leaving the composted manures on or near the surface of the soil.

Again: manures which are not volatile, but which are disposed to sink in the soil, such as lime, ashes, marl, clay, sand, &c., should be left on or near the surface ot the ground. And those manures which naturally collect moisture, may be left nearer the surface than others.

2d. Manures should be differently applied on different kinds of soil and subsoil. Long manures ploughed into a stiff soil, tend to loosen it, so as to admit more air and make it lighter.—Manures should be covered deeper on a dry gravelly soil than they should on a damp one. On a soil which is decidedly wet, the soluble and volatile parts of the manure would be likely to mix with the water, and to go off with it; while on a very dry and gravelly soil there would be more danger of losing the volatile parts of the manure by rapid evaporation, unless the volatile parts of the manure were fixed, or carefully covered. Volatile manures should be composted with peat or swamp mud before being applied to dry gravelly soils.

3d. Manures require to be buried deep or otherwise, according to the shape of the roots of the plants which it is designed should be benefitted by them. For those plants which send down long tap roots, the manure should be mixed with the soil, not only on the surface, but to a considerable depth below it. A number of years ago, I took an exhausted spot of ground, with a good, healthy, but exhausted subsoil, and after ploughing it deep, I gave it a good dressing of compost, which was left near the surface, and then I planted it with carrots. They came up and grew, and promised to make a very fine crop; the upper ends of the roots were large, but when taken from the ground, the roots proved to be very much shorter than the same kind of carrots usually were, when they grew in places where the soil was more deeply manured. But where crops are to be cultivated which send out their roots horizontally, as rye, wheat, corn, &c., and do not send them deep, the manure will produce more speedy effects, if it lies on or near the surface.

On a spot which I designed for corn, near my dwelling, I ploughed in a liberal dressing of fish offal, and lest they should smell bad, I ploughed them in with deep furrows; then manured the ground with barn-yard and stable manure, and planted corn, and my crop was only about the rate of forty bushels of corn to the acre, which was not more than I should have expected without the fish. The fish offal was too low to be fed upon much by the roots of the corn. The next year, however, I ploughed the same spot over again, with other deep furrows; this brought the remains of the fish again near the surface, and where I then planted corn, it yielded a luxuriant crop. In some places the corn yielded as much as fifteen ears to the hill.

4th. Long manures which are covered in the soil, decompose, and frequently give out their strength to promote the growth of corn just at the time when the corn is making seed, and needs it most. In this case a little well-rotted manure in the hill, to give the corn an early start, proves beneficial. But long and coarse manures do not suit parsnips, beets and carrots, and according to my experience, where parsnips, beets and carrots are planted among coarse manures, instead of their growing smooth and handsome, their roots almost invariably grow prongy, and the crop is never large. Beets, carrots and parsnips require manure which is well rotted, and ready to give immediate nourishment to these crops.

Where volatile manures are used with a view of materially benefitting crops which are to grow a number of years after the manures are applied, the manures should be worked in deep. A garden, which has been well manured and well dug, so as to work the manure in deep, retains a portion of its fertility for a number of years after the application of manure is suspended; while a soil manured with volatile manures, which are left on the surface, is soon exhausted.

A number of years ago, I buried a dead cat in a mowing field, to the depth of perhaps twelve to eighteen inches. The first year, no increased fertility was observed about the spot, but for several years afterwards, the grass grew with increased luxuriance over the grave of the cat.

This encouraged me to make another experiment. I therefore took an exhausted piece of land, which had lain in corn hills and sweet ferns, and without manure for very many years. Into this we then ploughed with fish, with good deep furrows, at the rate of 25,000 to 30,000 to the acre, and then planted potatoes. The next year we sowed it to oats and grass, and then mowed the ground for six successive seasons next following. During all these eight years the crops were improved, and during the first seven years they were very considerably improved by this one manuring. And these eight crops, after deducting all expenses for rent and cultivation, (except the expenses of removing the stones from the ground,) gave a nett profit at the rate o about one hundred dollars per acre. This nett gain was in consequence of applying the manure in such a manner as to need but a small proportional expense for the after cultivation. For, in this course, there was no expense for the cultivation after the second crop. In the six years which we mowed the grass, there was no expense but the expense of harvesting. And to have ground so much like the garden of Eden as to bring forth rich crops spontaneously for even the limited period of six successive years, without any other expense but harvesting, is not only a great advantage, but to us it was very pleasing. Had all this manure been left on the surface of the ground, we think it would have destroyed the first crops in the course, and we think the manure have then evaporated so as not to have materially benefitted the last of these crops. But to a *tenant*, who had a lease *for but one year*, it would probably have been more advantageous to have left the manure nearer the surface, and to have spread it out more extensively; yet even then we think he could not have realized any thing like the same amount of nett profit by its use.

Now then, it appears to me, Mr. Editor, that so long as the questions about long manure and short manure—the degree of rottennesss which manures should attain before they are ploughed in—and the depth to which they should be covered—so long as these questions are stated in general terms, without reference to the different kinds of manures which are used—without reference to the different kinds of crops to be cultivated—and without reference to the differences of situation, circumstances and soil on which they are grown—the debates on these subjects, (which have been going on ever since I first became an agricultural reader,) may be uselessly continued, and a large amount of ink may yet be shed in the controversy, without coming at all nearer to a settlement of these mooted questions than at the commencement;—for, unless my experience is fallacious, the degree of rottenness which manures should acquire before being used—and the depth to which manures are ploughed in, *may be varied*, and *ought* to be varied according to the various kinds of manure which are used. the various situations and kinds of soil to which they are applied, the various kinds of crops intended to be benefitted by the manures, the length of time before the manures are required to give forth their whole strength, and the various circumstances of the cultivators

I remain, Mr. Editor, very respectfully yours,
And the public's very humble serv't,
Asa M. Holt.

East Haddam, Ct., March 15, 1844.

Note by the Editor.—When our correspondent says that his eight crops (on the piece of exhausted land manured with fish,) six of which crops were *grass*, yielded him a *nett* profit of about one hundred dollars per acre, does he state what he intended to? The amount named as *nett* profit per acre, (considering that six of the crops were *grass* alone,) seems to us an over estimate—unless in our correspondent's vicinity, hay has a higher value or yields much more abundantly than with us. We think he must have erred (unintentionally) in the statement of the profit. Or do we misapprehend him?—does he mean that one hundred dollars was the total not the yearly profit?

From the American Farmer.

USE OF CHARCOAL AS A MANURE FOR WHEAT.

Dr. Lee, in his admirable address before the Agricultural Society of Erie County, N. Y., states it as a fact, that the liberal application of *charcoal* to the *wheat* fields of France, has added, *within the last ten years, one hundred millions of bushels to the annual crop of wheat grown in that kingdom.* What quantity of charcoal is there considered as a liberal application, per acre, we are not aware, but should presume that twenty bushels would be found sufficient for every practical purpose, and as we have implicit confidence in any statement of fact, which Dr. Lee would make, we feel it to be our duty to lay the

present one before our readers, in order that they may avail themselves of this meansof *restoring* any lands which they may have, that once were good wheat lands, but have ceased to be so, to a condition congenial to the product of this important crop. And that their experiments in the use of charcoal may not be expensive, we would advise all to test its utility upon an acre or two at farthest, selecting such parts of their fields as may offer a fair opportunity of producing results not calculated to deceive.

Although we do not belong to the tribe of husbandmen, who hallow things merely because they have been handed down from father to son, through a long line of generations—although we confess ourself to be imbued with the spirit which impels man onwards with the improvements of the age, still, where expense in the procurement of new manures are to be incurred, we think it safest to exercise caution in *expenditures*, as there is no class in the communities of men, where *true* economy is more needed than among farmers; for, with very few exceptions, profits are only to be attained by them by the pursuit of that enlightened system of management, which husbands means, without denying to the soil any of the appointments essential to the development of its capabilities, the melioration of its condition of fertility, and the amendment of its texture.

A leading object in reverting to the use of *charcoal*, as an improver of wheat lands, and in arraying before our readers the emphatic fact stated by Dr. Lee, springs from the hope that some of our numerous subscribers may be induced to try its efficacy upon the now growing crops. It is still time to make the experiment, and surely, if the advantage to be derived is as represented, with regard to the enhanced product of France, the strongest inducement is held out to every wheat grower, to subject a portion of his lands in wheat, to the sure and unerring test of experiment. Should any make such experiments, we respectfully ask them to permit our paper to be the medium of communicating the results to the public.

We do not affect to know what are the precise action of charcoal, and it may be premised, that even those who have an intimate knowledge of the science of chemistry, could not undertake to decide upon the question at issue. What we do know of charcoal, is calculated to impress us with a very high opinion of it as an agent of fertility. We know that if it be incorporated with animal or putrescent manures, that it exerts a most powerful economy in preventing the escape of the fertilizing gases: we believe that when applied in sufficient quantity, it will arrest, or rather prolong, the process of decomposition; thus continuing to a greatly extended period, the capacity of such manure as a fertilizer. If we approach a dung heap which is in a state of rapid decomposition, our sense of smell at once detects the escape of the volatile gases, which sensibly fix upon the susceptibilities of the olfactory organs. But if we mix with this decaying mass, a quantity of charcoal, though the decay may still go on, it will be at a greatly retarded rate, and from the affinity possessed by the charcoal for the ammonia eliminated by the carbonizing bodies, the pungent odour will be no longer perceptible to the senses, as it is seized upon by the charcoal and held in a state of fixedness. So also, if we go into a close stable, the same effect will be visible; but let the floor of that stable be strewn with charcoal or gypsum and, in a very short period, the unpleasant odor will cease, and for the simple reason, that the ammoniacal gas has been absorbed by the charcoal, and diverted from its natural tendency to ascend and become mixed with the surrounding atmosphere.

It is maintained by some of the most scientific writers upon the subject, that the decomposition of all bodies, whether of fresh manure, or of organic remains in the soil, is produced by the operation of *combustion*—a combustion similar in character, though infinitely slower, to that produced by fire. Now, we profess to be believers in this doctrine, and hence we infer, that the peculiar use of charcoal, to consist in its competency to absorb and retain within itself for a considerable time, those fertilizing gases which are produced by the decomposition spoken of, and which, by the by, constitute the very essence of all putrescent manures—the very life and spirit which supports, to a considerable extent, the growth of plants.

It has been a remark, justified by the observation of the best informed farmers, that *new grounds*, where their mechanical texture is adapted to the growth of the wheat plant, are most favorable to its culture and product; and that such grounds, in a series of years, cease to be so—Why is this so? Is not the inference fairly deducible from the facts stated, that it is because by cultivation; by the letting in of the warming influence of sun and air, the decomposition of the vegetable constituents of the soil has been brought about, and that owing to the escape of the ammoniacal gases, by evaporation, and the appropriation of them by the successive crops to their uses, that the earth has become so exhausted of its vegetable pabulum, that the sustaining principle exists in such minute proportions in the soil, as to no longer furnish to the cultivated plant its requisite quantum of nourishment to carry on that healthful and vigorous expansion of the system of roots and stems so essential to the perfection of the grain.

If we are right in our conjectures, it would seem to follow as a natural consequence, that where the land has, by culture, become deprived of its carbon, or the material for forming it by *combustion*, that the husbandman should set himself to work to supply the deficiency; and if this be admitted, there can be no better mode adopted than by the application of pulverized charcoal. It is admitted by most competent minds, that soils *abounding in vegetable remains* are more competent to attract *moisture* from the atmosphere than those which have been deprived of them. While the many admit this fact, but few, if asked the question, can tell you why they are so. But agricultural chemistry comes to our relief and solves the question at once. It tells us, that lands constituted liberally of such remains, possess the capacity of absorbing this moisture, or, more properly speaking, of absorbing and retaining the ammonia which floats in the air, and forms a constituent property of all snow and rain; and that this *capacity* is imparted to the earth by the carbon produced by the combustion of vegetable remains, or in other words, by their decomposition and decay; and that, in proportion to the quantity of matter bearing a relation to charcoal existing in the soil, so is its power to absorb and retain regulated.

We know, that lands, which have been exhausted by injudicious culture, have been restored to fertility by the culture of clover and the application of plaster, and that so soon as we can get them to sustain a good stand of clover, so soon may we date their meliorated condition. These facts go to establish the truth of our doctrine; the clover-ley turned in furnishes both carbon and ammonia, while the latter not only seizes upon the latter as it is produced, gives it fixedness, attaches it to the soil, but appropriates to the use of the plants that also which floats above it in the atmosphere, and descends, as we have before remarked, in the rain and snow. If this were not true, it would be impossible that so small a quantity as a bushel to the acre, could exert the immense power that it does. We do not pretend to affirm, that the powers of attraction and condensation, possessed by plaster, are its only powers or uses, but we may, in all modesty, claim this as among its most potent agencies.

From the course of our remarks, it is obvious that the action of *charcoal* upon any lands adapted to the culture of wheat, must be eminently beneficial; and from the circumstance of its being difficult, if susceptible at all, of solution, that when once applied, it will exert a wholesome influence for a long series of years; and hence, that it would prove not only to be a lasting, but a cheap manure.

We have thought much upon the subject, and we have come to the conclusion, that each farmer would find it to his interest, every year to mix charcoal with his long manure before he carts it out upon his fields, as in so doing he would prevent the loss of a considerable portion of the most valuable of the constituents it possesses—we mean the fertilizing gases, which, by heat and moisture, are generated, thrown into the air and lost.

From the Albany Cultivator.

MISSISSIPPI—HER AGRICULTURE, &c.

PRIVATE CORRESPONDENCE.

We have, within the last few days, received an ample package from our friend, M. W. Philips, M. D., the able senior editor of that excellent Journal, "The South-Western Farmer," published at Raymond, Miss. It is rarely that we have been more interested than in the perusal of the several papers, and we regret that the strict injunction, "not to print," will prevent our readers sharing with us in the pleasure which the life-like sketches of domestic custom, as well as of men and things in that portion of the South would have given them. A few extracts, however, are permitted, and will be found below and in our next. It is evident the spirit of improvement is abroad in the South, and the advance, within a few years, has been truly great. Indeed, it could scarcely have been possible it should have been otherwise, when such men as Philips, Affleck, Cloud, Fanning, and a host of kindred spirits, took upon themselves the labor of enlightening the public mind, and, in their own practice, giving an example of what a more skilful method of culture could accomplish.—There is much yet respecting the South that is misunderstood. Its capabilities and its productions have been decided upon, more with reference to the sea-coast, or that of the gulf, than its vast and fertile interior. A few such men, however, as Dr. P. with his perseverance, taste and intelligence, scattered over that region, will, by the influence of their writings and their examples, correct and expand a vitiated and limited public sentiment, and give to agriculture and horticulture their proper place in the pursuits and aspirations of the planter. Care will take the place of negligence, economy that of improvidence, and comfort, a word that embodies so many associations delightful to the lover of nature, will become more common than it now is. We give the extracts for the truths they contain, and to show what an observing, intelligent man, who is willing to devote the rich gifts God has bestowed to the benefit of his fellow-men, can accomplish:

"We are too improvident in all the South, to enable us to enjoy the real pleasures of the climate we live in. There are many who have little else than hog and hominy all the year, who are able to afford better living, if property be a test. There are numbers, with good estates, that have no fruit excepting a few peaches. The majority of my people, I do very believe, would look upon the Dahlia as a noxious weed; the Cape Jessamine as a worthless shrub, and if it could be that a noble Camelia were standing in a field where a plough could run, even in full bloom, that it would be cut down and cast into the fire with as little compunction of conscience as if it were a sassafras or box elder. They are unable to see any beauty in the noble steed, stately cow, happy hog, farther than they contribute to the making of cotton. Yet, with all this, there are redeeming spirits enough in the land to make one love his fellows. They are the right sort of material to make good farmers out of; they are beginning to see beauty in all things that a beneficent Providence has given excellence to; and I look for the day when our people will build and plant, rear and nourish, with reference alike to the useful and ornamental."

"Although I have been in Mississippi since 1830, (my native place being Columbia, S. C.,) I have seen comparatively little of the State, as I have found full employment at home. I can then, therefore, say little as regards fruits, shrub-

bery, or flowerc; yet a residence of two years at Philadelphia, one of the most favored Northern locations for fruits, will enable me to speak of the comparative excellence of Northern and Southern fruit with some confidence. The best peaches, melons, and figs I ever saw were in the South; the first and last in Mississippi, and with a single exception, the best of melons also. The best pear I ever ate was in the house of "Harry of the West;" the best apples were from Northern regions. I have found as good summer and fall apples South, as I ever did elsewhere, and excepting that one pear, the sugar, I have seen no finer than in Carolina; whilst the plums, I think, could hardly be beaten anywhere, that I ate in South Carolina. And flowers—here is the land for this beauty of all beauties--a woman and a horse excepted—and they only because the noble intellect governs. The pride of the forest, the Magnolia, grows here in all its majesty; many flowers that with you require protection, pass out of doors our winters—many that require considerable tact with you to propogate, can be cultivated here by any little urchin. But to return to fruits; there are too few fine varieties of fruits in this region. I know of no gentleman who has any varieties of grafted apples or pears that are in bearing save one or two. One gentleman near Vicksburg has some fine pears, and Mr. Hatch assured me they are equal in quality to the same variety at the North, but they ripen much earlier. I have now some twenty-five or thirty varieties of the apple and pear, and shall put out this season at least fifty more. My reason for going so extensively into variety, is to be certain of some that will do well. I have some ten varieties of the cherry, five of the strawberry, three of figs, and three of raspberries. Of peaches I know not yet what I shall have, as, besides budded and Northern fruits, I have some two hundred and fifty seedlings three years old, and two hundred more I shall put out this spring."

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LETTER FROM THOMAS, AFFLECK, ESQ.

We give below some extracts from a most interesting communication received from our friend Mr. Affleck, of Ingleside, Miss. The extracts relate to topics of interest at the North as well as the South, and will aid in throwing light on the productions and modes of culture in that fertile section of the Union. The doubts which have existed as to the capability of the South to produce its necessary provisions, or to grow the principal varieties of Northern fruits, doubts which had arisen more from the neglect of the planter, than any other cause, will soon be dissipated by the example of a few such men as are now engaged in enlightening that section of the United States as to its capability and true policy.

Mr. Affleck has transmitted to us two specimens of cotton in the seed; one a specimen of good Mexican, and the other a specimen of that shown by Dr. Lovelace, at the Adams County Fair, Mi., and supposed to be a hybrid between the Mexican and some long stapled cotton. Dr. L. not having completed his experiments, did not disclose the manner of its production, but, who can say, that a more beautiful specimen of cotton than the improved, has never met our eye. and shows most conclusively, we think, what a field is open for the well-informed and scientific cultivator, in the improvement of this national staple.

"There is but one difficulty as to *pastures* and that is *none are made.* No one attempts to form pastures in any other way than by turning out fields after they will no longer produce cotton or corn, and being satisfied with the scanty crops of sedge and Natchez grass, and of briars which they may yet be able to support. Within the last year or two, however, better things are attempted. I have seen very promising woodland pasture of orchard grass; and winter pastures of Egyptian oats and rye are becoming common on well managed plantations. The cane swamps afford tolerable grazing; at all events the swamp cattle manage to grow and even fatten on the abundant browsing they find there, and make pretty good beef and capital work-oxen. These are the rams-horned, brick-colored cattle, known as Piney woods, swamp, Opelousas, or Attakapas cattle—descendants of the original Spanish stock, and yet found in those regions uninjured and unimproved. During the winter, we have no lack of abundance of feed for all kinds of stock, and, in summer, we have only to have recourse to Bermuda grass, to keep every thing *seal fat.* This is the most nutritious grass I have ever seen, and where exposed, the most closely grazed. It resembles *Nimblewill,* (Triticum repens,) but is more delicate in its appearance, leaves much more numerous and narrower, stems small and solid, growth rapid, and when in meadow, it does not attain a height of over twelve or fourteen inches. Yet I have seen this delicious looking grass afford, at a second cutting, between five and six tons to the acre of dried hay. The first and *third* cutting not so good. It stands so thick on the ground, and its numerous lateral leaves so closely interlocked, that a good hand cannot cut over more than half an acre per day, and has to cast aside the swarth with his foot, at every second or third cut, the scythe blade passing under and cutting the grass, without laying it over. It is a troublesome grass in the cotton field, but can be got under by a crop of corn and pumpkins, or oats followed by peas; it can bear little or no shade. It is invaluable for coating enbankments, and is of incalculable benefit on the levees of the Mississippi. It is stated upon good authority, to be "the Doul grass of the middle provinces of Hindostan." Whoever brought it to this country, is as deserving of a monument to his memory, here, in the South, as is Parmentier in France.

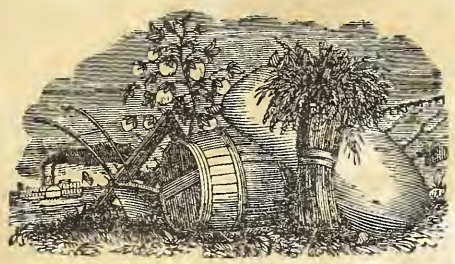
"Within some three or four years, another creeping grass has made its appearance here, said to be a native of and abundant in Cuba, and is rapidly spreading; that suits their upland, and thrives better there than *Bermuda,* and is green and grows all winter, whilst the other is cut down by the first frost. I am now using it in my garden and grounds for edgings, grass plats, &c. and think it will answer well, as being easily kept within bounds, of a dwarfish growth, forming a close sod, and remaining green summer and winter From the reports of Dr. Philips and others, it would appear that in the *Musketo,* a Texian grass, we have another valuable resource, particularly for winter pasture. Dr. P. presented me with a small quantity of seed, which is in the ground."

"You see how I ramble along! I will now return to my forgotten text, *Sheep in the South.* You are right.—"the old notion of the impossibility of growing good wool at the South, is giving way to the evidence of facts." The doctrine that all wool-bearing animals, except the negro, have their wool, in a very short time, turned into hair in the South, is also exploded. True, the common sheep of the country, bred in-and-in for generations, and ranging now in miserable burnt-up pastures, and again in the cotton fields, where they become excessively fat on the tender *winter grass;* the one season shorn, and the next allowed to surrender their coats to the briars—such sheep have thin, scanty, hairy fleeces. But they form no criterion. Are there no such animals elsewhere, 'bred by, and the property of nobody in particular, the United States over?' Why is the coat of the black-faced sheep of the mountains of Scotland, so coarse and hairy, whilst that of the Merino of Spain and of New South Wales, where they scarcely ever see frost, so fine in its staple? I feel satisfied of one thing, that the finer and more spiral the staple, and the closer and heavier the coat of wool, *and the greater the abundance of yolk,* the better will the wool on the sheep's back resist the injurious effects of the sun. Sheep are kept by the planter, in almost every instance, for the mutton alone; some few manufacture the scanty crop of wool. The mutton is *very* fine, *almost equal* to that of the mountain heather fed sheep of my native country—and that you know, is a great deal for a Scotchman to say! The native sheep of which I speak, are remarkably full and broad in the loin, and the saddle is of course proportionably good.—Sheep seem to me always to be in good health here—one never hears of the halt of a large flock dying off within a few days, as is by no means unusual in colder countries, where numbers have to be penned together for a considerable length of time.

"We have thus, you perceive, no scarcity of *beef and mutton.* Many planters in Mississippi are now making their own pork, or are exerting themselves to do so. In the neighboring County of Jefferson, this is more particularly the case. I know of several there, who last season killed and cured from 100 to 200 head; one who killed 350, and another over 700 head, all for their own home consumption. The gentleman last alluded to, assured me that all his hogs were fattened entirely on peas. which were planted between the corn rows at the last tending, and the hogs turned in on them after the corn is gathered; finer bacon I have never eaten. This gentleman has killed his own pork ever since the second year of his farming, some thirty years; tans his own leather, makes his own shoes, harness, &c., wagons and farming utensils; manufactures much of his winter clothing, and this without allowing himself to be influenced by the high or low prices of cotton, though, of course, when cotton brought 15 to 25 cents, he was, to all appearances, sinking money in employing his hands any where else but in the cotton field.—However, the best proof that his system was the true one is, that he is one of the wealthiest men in the country, living in the greatest comfort, his family settled round him, and his negroes comfortable and happy.

"You speak of being 'anxious that some one of your Southern friends would try the experiment of sowing corn broadcast, as an article of food for animals, to be used for soiling during the summer, and cured and fed, after being cut, to them in the winter, and ascertain what the practicability and expense of keeping animals in this way would be.' Corn leaves, you are aware, are now used extensively; but would not the stalk cured and cut into chaff, add much to the ability of the planter to feed stock, without materially adding to his expense? It would; and in my own case *does do so.* At 'Ingleside,' I feed nothing else. My farm here, only consists of forty acres of old field, which the small force I keep here, enables me to improve very slowly, the more, as to it is added five acres of garden, &c., requiring much manure. As I keep five head of horses, two mules, two yoke of cattle, from two to six cows and their calves, and some twenty to thirty head of hogs, I was forced to try some such means of making fodder, or have *blades* to haul from one of the plantations. In 1842, I sowed some corn broadcast, but the dryness of the season and the poverty of the land, prevented it doing much. I did not cut it, but the stock, when turned into the field, grazed on that patch of corn as long as there was a stump of it left. That winter I fed principally on *crab grass* hay, and corn cut and shocked Kentucky fashion—which does not do well. This last season I *drilled* several different patches of corn at different times during the spring and summer, drills from two and a half to three feet apart, and the stalks almost touching in the drill. It all did well; so well that though I had not more than an acre and a half in all, I fed my stock on it during the whole summer, passing the green corn through the cutting-box, with a proportion of one-third or one-fourth of dry fodder; cutting down and curing what was left of each patch, when the next sown became ripe enough to feed out. I have thus sufficient fodder to do me, I think, or nearly so, until oats are ripe, and my drilled corn comes in again. It must be in tassel, or tasseling, before cattle and horses at all relish it; and hogs, though they eat it greedily, *fall off* on it; for the reason, I think, that they reject all but the juice, and hang round the fence all day waiting for more. I have tried the Egyptian millet and Guinea corn, but prefer the maize.

"Pulling corn blades to make fodder, I consider the most unhealthy and unprofitable work done on the plantation."



WEDNESDAY, MAY 1, 1844.

PLOWING CORN—TOPPING COTTON.

In tendering our acknowledgements to Mr. McKee, for an account of his last year's crop, with which we have been quite interested, we desire to offer a few remarks in reference to the necessity of deep, subsoil plowing in the preparation of land for a crop, and as to the advantages of topping cotton, and its propriety.

The experience of scientific and practical men, attest most conclusively the advantages of subsoil plowing in the preparation of land for a crop, both as a preventive against the prejudicial influence of a drouth, and an excess of rain. The reasoning for this system of culture, is based upon the plainest principles of philosophy and common sense, and is thoroughly sustained by actual results. The subsoil plow, which we believe is scarcely, if at all, used at the South, is constructed for breaking the subsoil thoroughly, without mixing it with the soil.

When thus prepared, the subsoil becomes an absorbent of the extra quantity of water that may fall, which it retains to be given out by the process of evaporation whenever the absence of rain shall, in the economy of nature, render such evaporation necessary to the sustenance of vegetation. By this process, then, the planter converts the subsoil into a reservoir, which serves the double purpose of withdrawing the excess of water from vegetation in wet seasons, and from which nature will draw her supplies to sustain vegetation during the existence of a drouth. It is indeed a beautiful theory, and one which we are quite astonished has not obtained to a greater extent among Agriculturists. But the progress in improvement is onward, and we hope the day is not far distant, when the South will boast as high a state of Agricultural improvement as any section of the Union. To do this, however, one of the first subjects which should engage the attention of planters, is, *how they can cultivate less land*? This is a very important question, upon the successful solution of which, depends the progress of improvement, because it strikes at the root of the evil of which we complain. The effort to cultivate a great quantity of land, not only forbids, but positively prevents, the thorough preparation of land for the culture of a crop: and hence, a system which is begun in imperfections is carried out, resulting in immediate loss to the cultivator himself, and prejudicially to the general prosperity of the country. It is because of this hurry and confusion in the culture of so much land, that our lands are so imperfectly prepared: hence, few, if any, can obtain their consent to make the experiment of cultivating less land, and doing that in a proper manner.

In our opinion, when the land is thoroughly broken as we have suggested, with the subsoil plow, (which should be begun, and, if possible, completed, prior to planting, though the breaking between the rows might, in an emergency, be done after planting,) the subsequent culture of the crop should be almost exclusively a mere surface dressing—which, while it would effectually eradicate the grass and weeds, should by no means disturb the lateral roots of the crop. This surface-dressing also serves, by levelling the land, to diminish the exposure to the sun, and consequently lessens evaporation, which is also very important. Late plowing, particularly if deep, we regard as a dangerous experiment always, and rarely, or never necessary, when the land has been properly prepared in the outset of the crop. It is true, as in the case mentioned by Mr. McKee, it sometimes succeeds well, because the rain came at a proper period; but, in the absence of a rain, we apprehend no one will question that it would have proved disastrous. The comparison, therefore, between Mr. McKee's crop and his neighbors, is, we think, not a just or fair one, for theirs wanted the proper preparation of the land in the commencement of the crop.

The subject is however replete with interest, and should engage the earnest consideration of Agriculturists at the South, where improvement is so much needed; but as our limits will not permit us to-day, to enter more fully upon the subject, we must pass to the consideration of the propriety of topping cotton—upon which there are, we are well aware, very opposite opinions.

Without an opportunity of testing the truth of our own views upon this subject, by actual experiments, we incline to the opinion that its propriety should always be determined in reference both to the character of the land for richness, and also to the season, whether it be wet or dry, facts upon which the planter must determine at the time. In very rich lands, or wet seasons, where the growth is very luxuriant, running pretty much into stalk, without sending out lateral branches, we regard topping as a very necessary process; but on the other hand in poorer soils, and a dry season, we think it doubtful whether it is ever needed. Of the necessity of the process therefore, the practical planter will of course always determine, and in our opinion what might be very advantageous in one season, whould be prejudicial another, even in the same land. Upon both these subjects however, we should be much pleased to have the views of our friends, and hope they will not withhold them.

Jasper County, Ga., April 8th, 1844.

Mr. Editor:—I submit to you a history of my crop of last year, which I desire you to give a place in the Southern Cultivator, if you think it worthy.

I cultivated 150 acres of land, all fresh except 25 acres, which was worn. There were ten hands employed in its cultivation. The mode of culture and the result, I will give you in detail, and are as follows: I was so late in the commencement of my crop, that I had only 8 acres broken on the 18th of March, my object being to manure as much as possible. I was compelled, for want of time, to manure in the drill as I planted, though but little was applied to the corn. I planted my corn by running furrows each way three feet distance, dropping two grains in a hill, and covered by running two furrows, one on each side, with a very small plow, and immediately broke the land between the rows. I then planted my cotton in drills three feet distance. In the drills I strewed my manure, which consisted of killed cotton seed and manure from my lot. I worked the corn and cotton successively once in three weeks, with the plow and hoe. The first and second working of my cotton, I only run round the plant; but, in chopping out, or thinning, I was careful not to chop so deep as to disturb the manure. My last thinning, which followed my second plowing, was done principally by hand.

My corn received the last plowing and hoeing about the middle and last of June, when it was in the boot. This last plowing was more shallow than those preceding, and more distant from the corn. After this plowing, I had some dirt drawn to the plant to kill the young grass which had escaped the plow.

The result of the corn crop was, a fine crop of fodder, and 420 barrels of corn, most of which was measured.

The cotton received its last working about the 5th of August. I put no dirt to the cotton, except to cover young grass, and to replace the dirt which had been taken away in removing the grass or weeds. I topped all my cotton, except a small part which was accidentally left, which gave a striking demonstration that the topping did no good; for that which was left, bowled equally as well as that which was topped.

The result of the cotton crop was 48 bags, averaging 420 lbs.—the weights of which I have now before me.

There was about an equal portion of land in cotton and corn—say from 70 to 75 acres each.

There are two circumstances which I wish to mention. They are these: Never cease plowing in dry weather, and not to risk thick corn, if planted late. There commenced a drought on the last of April, which lasted six weeks—the unbroke ground became hard; even that which had been broken was dry as ashes, and seemed to threaten devastation to the famishing corn. Many of my neighbors desisted, for the two reasons, that they did not wish their lands broken in clods, or the roots of the corn broken while the ground was so dry. Though being firm to my purpose, I continued to plow as effectually as my feeble means would permit: the consequence was, that when the rain came, it found my ground well pulverized, and clear of grass and weeds, and a most flourishing growth ensued. As regards the third case, after I had planted all my corn crop, except six acres which lay immediately adjoining the first planted, corresponding, in every respect, with the other land, the omission or delay being on account of wet weather for the length of about twenty days; it was all treated alike as to work, and each grew

alike well until the time of earing, when there came a drought of three weeks.

The older corn remained green, while the other fired some four or five blades high. There was only four or five feet distance between the two plantings; and, being alike in all other respects, except that some of the latter contained two stalks to the hill, (though the principal part of my crop was thinned to one stalk,) I imputed the prime cause of the firing to the late planting. If the drought had continued, it would have proved a failure; but, as the rain came in abundance, it eared very well.

Yours, &c., LEWIS McKEE.

WORTH ENDURING.—Carlysle, in his last work, says: "Beautiful is it to see and understand that no worth, known or unknown, can die even on this earth; the work an unknown man has done is like a vein of water flowing hidden under the ground, secretly making the ground green; it flows and flows, it joins itself with another vein and veinlets; one day it will start forth a visible perennial well."

CURE FOR CANCERS.—The Maine Cultivator says: "A gentleman who has, for some years, been afflicted with a cancer on his face, informs us that, after having followed the prescriptions of some of the most skilful physicians, at the expense of more than seven hundred dollars, having twice had it cut, he has been effectually cured by simply bathing it three or four times a day with brandy and salt. Those afflicted with these virulent ulcers, will do well to try it.

☞Witherspoon says: "Men may talk in rapture of youth and beauty, wit and sprightliness, and a hundred other shining qualities; but after seven years' union, not one of them is to be compared to good family management, which is seen at every meal and felt every hour in the husband's purse."

☞Patient industry accomplishes wonders. A little done daily makes much a year.

SUGAR VINEGAR.—To each gallon of water add two pounds of brown sugar, and a little yeast: leave it exposed to the sun for 6 months, in a vessel slightly stopped.

☞The heart that soonest awakens to the flowers of life, is always the first to be wounded by its thorns.

☞Take every opportunity of setting an ornamental shrub or choice fruit tree about your house or door yard. Now is the time. If you have any taste, you will always rejoice at what you have done.

☞Give sheep pine boughs once or twice a week; they will create appetite, prevent disease, and promote their health. So says "The United States Complete Practical Receipt Book."

☞Never choose a woman for a wife who has thin lips and a sharp noise—except you want a *scold.*

☞Agriculture was the first, and should ever be the most esteemed of all pursuits. How happy would it be for hundreds and thousands of our young men, if they could be persuaded that a few acres of ground are a better capital than as many thousand dollars procured by writing their names at the bottom of a negotiable note; and what years of misery might be saved if men would believe that a dollar actually earned as by farmers and mechanics, is worth a hundred in prospect to be gained in trade and speculation.—*Saturday Cour.*

MEASURING CORN.—Hunt's Merchants' Magazine, gives the following rule for measuring corn in cribs, wagons, boats, &c.

"Multiply the length by the width, then by the depth. The product multiply by 4, which will give the contents in bushels shelled. To get the bushels in the ear, multiply by 8. In either case cut off the right hand figure, which is the fraction.

EXAMPLE.

Length,	20 ft.	20 ft.
Width,	10 ft.	10 ft.
	200	200
Depth,	7 ft.	7 ft.
	1400	1400
	4	8
	560,0	1120,0
	Bushels shelled.	Bushels in ears.

From the Worcester (Eng.) Chronicle

SIXTY BUSHELS OF WHEAT TO THE ACRE.

We state the following fact to show what may be done by proper management. Henry Workman, Esq., Solicitor of this Town, planted about an acre and three perches of ground with rather more than a bushel and a half of the red cluster wheat, furnished by Mr. Robert Beman, of Lenchwick, and the produce is 20 bags or 60 bushels to the acre! The seed was set by the hand, that is, it was dibbled. The land upon which this extraordinary crop was grown is known to be as good for cast as any in the Vale of Evesham.

TAKE GOOD CARE OF THE LAMBS.—A good shepherd may be known by the number of lambs that he raises. If any should die, don't throw them up on to the roof of a shed, or on to a tree, to poison the air, but skin them, give the flesh to the hogs, and save the skin. The most delicate gloves are made of young lambs' skins, and they are an article of considerable trade in some parts of Europe.—*Maine Farmer.*

HOARSENESS.—One drachm of freshly scraped horse-raddish-root, to be infused with four ounces of water, in a close vessel, for two hours, and made into a syrup, with double its weight in vinegar, is an approved remedy for hoarseness: a teaspoonful has often proved effectual; a few teaspoons, it is said, have never been known to fail in removing hoarseness.

BROOM CORN—Is much cultivated on the Connecticut river, in Massachusetts. The amount produced on the acre is from 800 to 1000 lbs., besides 60 or 70 bushels of seed; the bush is estimated to be worth four or five cents the pound, and sometimes ten or twelve cents. The seed on an acre, at 33 cents per bushel, is said to be equal to a crop of oats. Thirteen hundred acres of this plant are cultivated in the town of Northampton and vicinity, the brush and seed of which is valued at $100,000 annually. The adjoining town of Hadley manufactures brooms to the value of $160,000 annually. One person, it is said, makes 80,000 brooms a year. The process of cultivation is like that of Indian corn.

FARMING OPERATIONS.—Get your carrots forward, and try Rowland's Macassar if the crop looks unpromising. Plant your potatoes with salt, which gives them a relish; and dress with bits of woollen cloth or shreds of old coats, which will improve the potatoe's jacket. Now, sow your P's; keep your U's warm; hive your B's; shoot your J's; feed your N's; look after your potatoes' I's; and then take your E's.—*Punch's Almanac.*

LOVE OF FLOWERS.—A love of flowers is one of the earliest of our tastes, and certainly one of the most innocent. The cultivation of flowers, while it forms an elegant amusement, is a most healthy and invigorating pursuit. Unlike hunting, fishing, shooting or similar rural amusements, it inflicts no suffering on any of the animal creation, and merely aids nature in her efforts to make the world beautiful to the eye, as the fruits are pleasant to the taste. The flower garden, while it agreeably occupies the time, does not impose a heavy tax upon the pocket, and there are very few flowers but what may be cultivated to as great perfection in the garden of the peasant as of the peer. It is a taste, too, which is well adapted to the female character, and affords much rational amusement to the recluse, who by choice or chance is separated "from the crowded haunts of men, in busy cities pent."—*Manual of Gardening and Complete Florist.*

CONTENTS OF THIS NUMBER.

PAGE.
Address, pronounced before the Barbour Agricultural Society, by Jno. L. Hunter....65
The Productive Powers of Nature....67
On the right use of Manure; Use of Charcoal as a Manure for Wheat....68
Mississippi—Her Agriculture, &c....69
Plowing Corn—Topping Cotton: Worth Enduring: Cure for Cancers: Sugar Vinegar: Measuring Corn, etc....71-72
Sixty bushels Wheat to the acre: Take care of the Lambs: Hoarseness: Broom Corn: Farming Operations: Love of Flowers: How to have a Sharp Razor: Advertisements....72

TURNEP SEED.

A SUPPLY of the following varieties of fresh TURNEP SEED just received, viz:

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Large Globe Turnep, } Fine
" White Flat do. } for
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Aug. 30 18-tf WM. HAINES, JR.

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WM. HAINES, JR.,
No. 232 Broad street, Augusta, Ga.
August 30. 18-tf

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SOUTHERN CULTIVATOR.

VOL. II. AUGUSTA, GA., MAY 15, 1844. No. 10.

Communications.

For the Southern Cultivator.

CULTURE OF COTTON.

I propose, Messrs. Editors, to communicate to the reader of your public-spirited and valuable paper, the mode of preparing the land, and of cultivating the cotton plant, which has appeared to me, from experience and observation, the best adapted to our southern climate. And here permit me to remark, that I have long believed the system of deep plowing so generally pursued throughout the country, not only unnecessary for securing an abundant production, but positively destructive to the fertility of the soil. The labor it requires might be dispensed with, because unprofitable. The evident deterioration of the land under its operation, should induce the farmer to abandon it, and to adopt one more congenial to his true interest.

I am aware that I shall be opposed to deep-rooted prejudices. But let every system be kindly received, and soberly examined—rejected, if found to be practically unwise; and when experience has proved its utility, adopted. I am convinced that much unnecessary labor has been bestowed in the cultivation of cotton; from a mistaken opinion, that, even in soils naturally free and light, there must be a continued succesion of deep and heavy plowings until the plant has arrived fully to a state of maturity. In the sea coast districts of South Carolina, where long staple cotton is raised, and the hoe culture alone pursued, the production to the acre is not exceeded by any other section of country where the plough is almost the only implement of husbandry. Which fact has convinced me of the truth of the position I take. Another important result from this, what may be termed superficial cultivation, is, that there, fields now yielding a profitable investment have been under culture from the earliest settlement of that State, whilst the *new West* already presents to the eye of the traveller exhausted lands and deserted habitations. I am not, however, an advocate of the hoe culture to the entire exclusion of the plough. The two systems may be harmoniously united, and if the result of the year's labor, in the outset, be not fully equivalent to the production extorted from the soil by the eviscerating system; the results of a series of year's will amply compensate, by diminished expenses, abridged labor, and an improved country.

Supposing the field to have been thrown into ridges by the cultivation of a preceding year: the first preparatory to a new crop, is to open between them a tolerable deep and wide furrow, with a broad shovel-plow of theordinary construction. Into this should be placed, with the hand, the stalks of corn or cotton, if there be any of the growth of the previous year. The superficial soil, with whatever vegetable matter there may be upon the ground, must be drawn down with the hoe, and formed into a narrow list. An acre of land not stiff and unyielding may be thus prepared by two hands as the labor of a day is work. Over this list the manure intended for the ensuing crop must be strewed, and the ground will then be in order, for the freeborn or twisted shovel-plow; by either of which a new bed or ridge can be thrown up; thereby effectually covering the manure, and leaving a single furrow between the new ridges. The whole ground is thus thoroughly broken up, and prepared for the seeds. Planting in trenches opened by the scooter plow cannot be effected without the danger of exposing to the surface a portion of the vegetable matters deposited beneath: and is moreover objectionable, from the difficulty of having the plants thinned out to the proper distances. *Drilled cotton is never properly filled*, as this must necessarily depend, for the most part, upon the judgment of the field hands, whose object is to accomplish the most in the shortest time. A very cheap instrument has been contrived for obviating all the objections applicable to trench planting. This is a dibble of a very simple construction, and may be made by any jobbing carpenter. Take a piece of seantling, of light yellow pine, 8 by 2½ inches add 4 feet long. About 10 inches from one of the ends taper it off, on each side; giving it the form of a paddle, with a handle of a convenient size for being grasped. Bevel the square end, by lines drawn 2½ inches therefrom, and let the edge at the bottom be somewhat rounded—brought down to ¼ of an inch. For a sliding-guage, to regulate the chops made by the Dibble for the distances which may be required in planting land of different qualities, cut a groove in one of the sides, 1½ inches wide, and 1 inch deep, with such an inclination, that the lower end of the gnage, at the distance of 2 feet from the centre of the dibble may be in a line with the bevel edge. Provide for the guage a lath 1½ by 1 inch, which should fit the groove closely, and of any length which will mark the various distances in plantage; to be secured in its place by small nails easily drawn. The mode of operating with this instrument will be obvious. In a comparison, as to relative speed, with the scooter, the latter is undoubtedly preferable. Under every other view however the preference must be reversed. Let the experiments be made, and I have no doubt this single instrument will supersede every implement heretofore used in the planting of cotton—corn as well as potatoes might be planted with it.

The crop should be partially thinned as soon as the plants are fully up, the top of the ridges weeded, and dirt drawn around them—with the hoe. When this work has sufficiently advanced, the surface of the ground between the rows of cotton must be cleared of the weeds and grass which may have vegetated. This is easier, more effectually, and quicker done with the solid sweep or bat-wing-plow than by any other implement of culture. It is of a triangular shape; the extreme cutting points being about 20 inches apart. Its weight does not exceed 6 lbs; and from its construction it cannot be made to penetrate but a little below the surface; is light of draught; and under the guidance of a skilful hand, may approach the tender stems of the younger cotton with the safety and efficiency of the hoe. Three courses with this will be amply sufficient to put in good order the entire space of ground between the rows of cotton if at the distance of 4½ feet. It is decidedly the most valuable implement for superficial culture that has yet been contrived.

This then comprises the whole process of cultivation—until the plant has arrived at a growth which excludes the use of the hoe by its extended branches. The sweep should continue to stir the ground by a single course until the advanced state of the season renders that work no longer necessary. By this system, the use of the plow is abandoned after the preparation of the ground for planting. It is a system applicable to all descriptions of soil. It requires that the land be thoroughly broken upon before the seed has been placed in the earth; and under this condition only can it be pursued successfully. It lessens the labor of the field hand; and relieves the horse of that continued exertion of his strength which the system of deep plowing unavoidably requires. The cotton, when planted, is placed at such distances as the judgment of the farmer has determined the best adapted to the nature and quality of his land. There is here nothing left to the discretion of the field hand. Under such a system, I have no hesitation in affirming that lands not liable to injury by hearty showers will be improved by continued cultivation. By it, all the vegetable matter on the surface is effectually secured for the benefit of the growing crop. It would present the cheapest and least laborious plan of enriching the soil; and if commenced before the ground has lost its original fertility, it obviates the necessity of annually supplying it with manure.

I may at future time give you my views on the culture of corn.

Claiborne, Ala. A SUBSCRIBER.

For the Southern Cultivator.

Mr. Editor—The varied engagements of my farm, in which I take an active part, have not allowed me leisure until now to redeem my pledge of becoming a contributor to the columns of your agricultural paper—and even now I am tempted to an indefinite postponement, in view of my incapacity for such service. But when I look at the successive numbers of the Cultivator, see the scarcity of original communications, consider the importance of sustaining the paper, and knowing that its permanency can only be secured by adapting it to our products, culture and climate,—I feel disposed to lend a helping hand, however feeble it may be. You will not understand me as intimating that it is not now interesting and valuable—for to me it is both, the selections of which it is mostly made up being judicious and excellent. I have known for years that such a paper was needed among us, but was so foolish as to think that none but a practical farmer could conduct it advantageously. The inspection of a few Nos. not only dissipated my prejudices, but set me to work in the protection and improvement of my farm in such a manner, that I fear I would not be believed if I were to say how many *hundred dollars* I have been benefited, (in purse or prospect,) by the expenditure of one dollar per annum for your paper.

Mr. Editor, there is a large field for investigations, as to the best mode of protecting our rolling lands from washing, by means of ditching or otherwise: something efficient must be done in this respect, or all our endeavors for the improvement of our exhausted farms, or the preservation of those that are yet good, will be comparatively unavailing.

As to the best mode of producing and distributing manure;—the relative merits of the alluvial deposit on water-courses, swamp mud, and leaf manure, not only as to their fertilizing qualities, but the facility of gathering, hauling and applying, and of which, (other things being equal,) a hand will procure most per day. Will some of your subscribers, who have experience on this and other kindred subjects, please enlighten us? We need practical matter in detail: we need something to prompt us to *do*, and to be told how to do it.

The foregoing remarks and the subjoined, you may insert in the Cultivator, or reject at pleasure: I have no ambition to appear in print. I want to see, before I die, if it please God, (and I would write that name reverently,) our once beautiful country—now disfigured with bald hills and sterile plains—so improved and restored, that hopeless poverty or emigration may not be the only alternatives left our children; that the virtues which grow out of competency and contentment may abound; and that the vices springing from want and wretchedness, induced oftimes by unrequited toil, may find no place in our borders. But to the subject I had in mind when I took pen in hand, to wit: *spaying hogs*. My waning sheet forbids the intended preliminary remarks.

Pigs should be spayed early, soon after becoming inured to the change of diet required in weaning. 1st—because the operation may be performed as easily then as at any future time. 2d—should any die of it, the loss will be less. 3d—they seem less affected by it, and recover sooner. I pay no attention to the signs of the zodiac in choosing a time to spay; and having disregarded it for the last fifteen years with impunity, I conclude the popular belief in the "signs" of the times, is all the relict of an ancient superstition. My *signs* are—1st, pleasant or warm weather; because in very cold weather, pigs recently spayed may be injured by the great number of them, together with larger hogs, that pile up in the same bed. 2d—a dry pen; for if the pen be wet, the pigs will get muddy, and the operator's hands must become so, and consequently the lips of the wound; which may prevent healing by the first intention, (as surgeons say,) that is, healing without the formation of pus, and death may ensue or recovery be delayed. 3d—the pigs should be in "good order," if not fat; it is easier, perhaps, to spay a lean hog than a fat one—but any, whether fat or lean, may be spayed by an expert operator, and the fat ones recover best.

Where should the operation be performed, in the side or belly, and how performed? These are the most important matters. The advocates of belly-spaying argue—1st. That the operation is more easily performed in their mode. 2d. The place of incision is thinner. 3d. The effused blood will be more easily discharged.—The first position *may be* true, but any one capable of spaying at all, can, after a little instruction, spay in the side. This argument, too, rather contemplates the convenience of the operator than the *good* of the hog—a minor consideration, I ween. The second is true in fact—but, as will be shown presently, is entitled to no weight. The answer to the third argument is founded on the *fact*, that blood is never discharged from the cavity of the belly after the incision is sewed up, except in such cases as will terminate fatally—all effused blood being removed by a healthy process called absorption. But, (not to be tedious,) both reason and experience condemn the one mode, while they at the same time establish the other. We know, from the pendulous state of the belly, the weight of its contents must rest in part on the stitches, (in belly-spaying,) and tends to separate the lips of the wound; and, under high feeding, when the hog has so far recovered as to eat heartily, a pouch is formed, (which is of the nature of a rupture in human kind,) and is apt to injure the health, if it does not destroy the life. In side-spaying, on the contrary, the weight of the abdomen tends to keep the lips of the wound in apposition; hence, diminishes the irritation occasioned by the stitches, and promotes the healing process. In belly-spaying, an incision large enough to admit two fingers is made, and three stitches are ordinarily taken; in the side, one finger only need be introduced, and one stitch taken; and if few, or none of the muscular fibres be cut, not one hog in twenty, if well spayed, (*it is believed*,) would die without even one stitch—the muscles acting as a valve, and preventing the extrusion of the contents of the belly. Judge, then, of the comparative irritation of a large wound in the bottom of the belly, closed by means of three stitches, on which bears a heavy weight, tending (and too often successfully) to tear them loose,—and a small wound in the side, the lips of which are naturally kept in apposition, and closed with one stitch, and that one more a matter of safety than of necessity.

My mode is as follows. Having trimmed off the hair from the part, I make an incision, commencing an inch or more, according to the size of the hog, below the anterior part of the hip bone on the left side, and extend it downward far enough to admit one finger only, and deep enough to expose the muscle (the lean part) the full length of the incision in the skin: this, an expert operator will do at a stroke. The breadth of the knife blade is now placed parallel with the fibres of the muscle that is visible, (there are other muscles under it,) and gently plunged into the cavity of the belly; a finger is then introduced into the cavity through the muscles, (which separate fibre from fibre very easily,) and through the thin but strong and shining membrane that lines the cavity: this membrane is raised on the point of the finger, and the puncture in it enlarged to the size of the incision in the skin, then the *pride* (*ovarium*) is sought for in the loins, brought before the finger out of the orifice, and separated from the bag (*uterus*) by a knife: the bag is then to be traced by pulling it out tenderly until the other *pride* is found which being cut off, return the bag, introduce a finger *into* the cavity, pass it carefully all around the circumference of the wound, to be certain that the bag has *all* passed into the cavity of the belly, and not lodged outside of the membrane where it or a small portion of gut might become strangulated, and produce death. Then with one stitch only, taken with a curved needle, close the wounds. I have formerly been in the habit of passing the needle through skin, muscle and membrane; but more recently have taken only a superficial stitch, and my hogs do equally well. I use a knife, the blade of which is not more than ½ inch or ⅝ wide. The puncture made in the membrane is not so large at the point of my finger, yet the finger enters it under slight pressure: it should be enlarged so as to facilitate the return of the bag into the belly.

A Swineherd.

Covington, April 30th, 1844.

For the Southern Cultivator.

WHITE WASH.

Take ½ of a bushel of unslaked lime—which slake with boiling water—cover closely, to keep in the steam, strain through a fine sieve, and add a peck of salt previously dissolved in boiling water; 3 lbs. of fine rice flour, boiled to a thin paste; ½ lb. of sifted Spanish whiting; 1 lb of glue in a fluid state. Then to the whole mixture add 5 gallons of boiling water, stir it well, and put by, well covered, for a few days. Apply it hot, with a brush.

To vary the color, for red or pink, add Spanish brown; for lilac, common clay with Spanish brown; for a slate color, lampblack; for a redish stone color, lampblack and Spanish brown; for yellow, yellow ochre, or chrome, which is preferable. The shades of color will of course depend upon the quantity of coloring

matter added to the lime. It is said that green must not be put in, as lime will destroy the color, and the wash will crack and peel off. The above preparation is cheaper than paint and more durable than the adulterated white lead which is manufactured in this country. Its brilliancy will of course depend upon the purity of the ingredients used. A SUBSCRIBER.

For the Southern Cultivator.

MINERVA, GEO., April 23d, 1844.

MR. EDITOR—In the last No. of the Southern Cultivator, I see some very stringent remarks by yourself upon the great want of patronage to the work. Your animadversions are seasonable and correct, and no doubt flow from a pure and honest desire to benefit the deplorable condition of the cultivators of the soil. I am one of this class of men: but, from an intimate and somewhat lengthy acquaintance with this class of my countrymen, I am by no means startled at the meagre list of your subscribers.

The history of our country furnishes ample testimony of the united and laudable efforts of mechanics, manufacturers, and gentlemen of the learned professions, the object of which is to benefit mutually the whole body. The great benefits they have sought, and obtained, by uniting themselves into well organized bodies, are too conspicuous for any comment. Many advantages have been derived from the united efforts of each member of the body of society. In these associations, each member throws his little mite into the general fund of knowledge. But who ever heard, (till late,) of a well organized society of planters in the South? The subject with us is yet in embryo: deep-rooted prejudices, and long standing habits, to follow in the old beaten track of our forefathers, will require time, patience, and much perseverance, to overcome. As a public journalist, I fear you will "become weary in well doing" too soon for our good. But permit me to say, press on; the prize is *ahead*. Many fields in Houston county, the place of my residence, for years past have been much exhausted; and, although contiguous to large beds, and deposites of the richest calcareous marl in nature, (with a few single exceptions,) no planter has yet availed himself of the advantage of applying this substance, and wonderful fertilizer of the soil, to his fields, while it lies literally at the door.

These beds of marl, by some powerful convulsions of nature, are placed in detached portions or spots, from near the Ocmulgee river to the Flint, and are in sufficient abundance to supply the whole State of Georgia with an article of manure, whose value can, in reality, only be properly appreciated by those alone who make the proper application.

These deposits of marl are discoverable immediately under the surface soil, and extend to an unknown depth. From some trials, made by the sinking of a few wells on, and near my lands, to the depth of twenty feet below the surface, there is but little appreciable difference in appearance of the marl.

The transitive lime-rock, of superior richness, always abounds in the neighborhood of these deposits. A few kilns of these rock have been put up and burned into the best quality of lime, either for building or the purposes of manuring. I have never been able to test the strength of these marls chemically, from the want of apparatus; neither do I know of its having been done by any chemist or geologist. But I am satisfied it is a far superior article to the marl of which Mr. Ruffin speaks in such high terms of respect, and which he found on the Santee and Cooper rivers, in South Carolina. I have been long acquainted with those specimens of marl, spoken of by Mr. Ruffin, on the Santee, and I am confident the marl in Houston is far superior; and, in addition to the superiority in strength, the application is much more easy: for the marl in Houston is found pulverized in nature, while much of the other is in the state of friable rock, which requires some labor to pound it before it is ready to be applied to the field.

You will now perceive that the same spirit of opposition to improvement in agriculture, which prevents planters from enhancing the value of their fields from one to five hundred per centum, while all the materials lie at the door, prevents them from taking your very useful paper, devoted to agriculture.

Yours, respectfully,

D. BRADWELL.

SELECTION OF SEED.

We are indebted to a much esteemed correspondent, for the following suggestions in reference to the selection of seed, which reached us just as we are going to press. We commend his views to the reader's attention, and beg leave to assure the writer that, so far from his letters ever becoming "*tedious*," the only complaint we have to make against him, together with several other zealous friends of our work, is, that we do not hear from them half as often as we desire.

"The perusal of Mr. Williams' prize essay, on the cultivation of Indian corn, afforded me much pleasure, and I hope some profit. He is wrong in one place: he throws away the best part of the seed. He says, 'The grains must then be taken from each end of the ear, and those of the middle used for seed.' The heaviest and best matured grains of corn on an ear, (and of course the best seed,) are those immediately at the large end, nearest the stalk. The correct plan, then, is to plant about half the grains on an ear of corn, beginning at the large end. The grains on the large end are sometimes disfigured by the pressure of the shuck while growing, which has probably led to the common practice of rejecting that part for seed; but the grains on the large end are the best seed, come up better and bolder when planted, and grow off faster, than from any other part of the ear. I have, (some years ago,) tried grains from every part of the ear, by planting them and watching the result. And the seed, from the large end of an ear of corn, will make roasting ears at least a week sooner than the grains from the small end.

The seed of the watermelon nearest the stem will produce ripe melons sooner than the seed taken from the blossom end. That I have tried. I have also observed, that the lowest grains of wheat, those nearest the stalk, on a head, are the fullest and best matured. An improvement might probably be made in seed wheat, by selecting those grains and sowing them. The suggestion is made for those who like to try such experiments. The same selection of seed might be tried on many other articles. No doubt other persons may have observed the same facts here stated: I mention them for the benefit of young farmers, who may begin in time to watch the most minute operations of nature; for they often lead to important practical and profitable results. For 'there are more things in earth, Horatio, than are dreamt of in your philosophy.'"

COTTON PREMIUMS.

Our readers will recollect that in a previous number we made some extracts from a letter of Col. A. McDonald, of Barbour county, Alabama; in which he referred to the importance of bestowing proper attention to the preparation of Cotton for market, and alluded to his own practice and experience upon this subject. As an evidence of his success, and to show to our readers how richly a little attention to this matter is rewarded, we take great pleasure in transferring to our columns the annexed paragraph and letter, which we clip from the "*Eufaula* (Ala.) *Shield*," and beg leave to commend it to the attention of every cotton planter.

COTTON PREMIUMS.—By the following letter, the reader will learn the disposition that has been made of the Premiums, offered by the Chamber of Commerce of Apalachicola, for the best Cottons sold in that market the past season—the farmer will also learn the great advantage of turning his attention to the *quality* rather than the *quantity*, when we inform him that Col. McDonald received 10½ cents for the very cotton upon which the premium of a fine silver Tea Set, has been awarded:

APALACHICOLA, April 27th, 1844.

COL. A. MCDONALD:

Dear Sir—We have the satisfaction of informing you that the Chamber of Commerce met on last evening, and awarded to your 20 bales, the Tea Set, as a premium for the best lot of 20 bales sold in this market this season. Yours was pronounced decidedly superior to any lot offered for any of the premiums: it was classed FINE, no other lot classed over *good fair*. Owing to some difficulty in making up the amount necessary to purchase the premiums, they have not yet been purchased; but the amount is now raised, and the Committee will send on in a short time, and make the purchases.

Captain Thornton's 50 bales took a premium, and Mr. Tyson's 10 bales. No lot offered for the 100 bale premium.

Yours truly,

MCKAY & HARTSHORN.

From the American Farmer.

A GOOD PLAN OF MAKING MANURE.

A writer in the Southern Planter recommends the following plan of making manure, of which we highly approve:

"Have a pit thirty or forty feet square and 2 or 3 feet deep, with a good bank around it.—In this pit, let the materials, viz: oak leaves, pine tags, earth, &c., be put in suitable layers; on which throw all the slop water, soap-suds, yard sweepings, as ley, contents of chambers, and in short every thing that can be conveniently got together. It may be at any convenient distance from the kitchen, so that the slop-water, soap-suds, &c., may be conducted to it by a trough. Be sure that no water gets into it in any other way. If at any time, it should become offensive, start your teams immediately and cover it over with *sand* or earth sufficient to prevent the escape of any effluvia."

We say we approve of this plan of making manure; but we think it might be improved by sowing plaster over each layer of the materials of which it is composed, and occasionally, say at intervals of two or three weeks, sowing it over the surface, by which means all unpleasant smells would be avoided, and the enriching gases saved to fatten the land. Any pit which may be made for the purpose, should be protected from the weather.

Selections, Extracts, &c

EXTRACTS FROM AN ESSAY ON THE INTERESTS AND DUTIES OF THE AMERICAN FARMER

Delivered before the Union Lyceum, of Hinds and Madison Counties, Mississippi, by Gen. PATRICK HENRY, of White Hall.

A farmer should not only be industrious and economical, but he should be emphatically an honest man. He has less excuse for being dishonest than any other man. At the same time, however, I do not mean to assert that any man can be excused for dishonesty, no matter what his calling or what his temptation. For if you admit anything to be an excuse, the whole temple of morality is overthrown at once—for I regard honesty as the chief corner stone; it is that without which the building cannot and ought not to stand a single moment. But still, I contend, the farmer should be the most honest of men, because he can be the most independent. With virtuous industry and frugal yet liberal economy, he can place himself, with the blessings of Heaven, beyond the pinchings of want. It has often struck me that the farmer should not struggle to be rich. There is something degrading in that feverish excitement to accumulate property—something which cankers all within and prevents the existence of one generous impulse, one high and lofty aspiration.—His end and aim should be an independent competence—at once removed from the temptations of wealth and temptations of poverty—for *both* have their *temptations*, and through to the general eye, the villain in silk and satin may not appear as forbidding as the same character in rags, yet to that eye which seeth in secret, and not as man sees, there is no difference. Pope has said, the saint in rags is twice a saint in lawn—and this is but another illustration of the fact that wealth *smothers up* character and hides its deformities, as well as sets forth its *beauties* in a more glaring light. But the farmer should repeat the prayer of Agur in spirit and truth, "Give me neither poverty nor riches." He should be comfortable and independent, but beyond this he should not wish to go—and by all means he should not make wealth, or its desire, absorb all his feelings and rob him of his usefulness as a man, and his peace and quiet, and permanent happiness. No! he should delight more in a good example, in knowing that his light shines abroad as an honest and independent farmer, than in being called a wealthy one. He should be fair in all his dealings with his fellow men, and never demand any thing, not the smallest cent, that was not justly due. He should square his conduct by the eternal principle of right, and be governed by the golden rule, Do unto others as you would that others should do unto you. If the world were governed by this rule in all its dealings, how much bickering and strife, and low cunning and deceit, would be banished from the land! How pleasant would be our abode on earth! It would be like the dew that descended on the mountains of Herman, like the precious ointment that ran down upon the beard, even Aaron's beard, that ran down upon the skirts of his garment, for it would cause the world to dwell together in unity and brotherly love. The farmer should be above doing a mean action—he should scorn with a sovereign contempt all over-reaching in trades, but he should be straight forward, unevasive and plain in dealing. He should not desire something for nothing, and he should not be governed by the rule to make as much as you can, no matter how you make it. No! No! He should not frown into utter *annihilation* the infamous thought, before it was even fully formed in his bosom. He should look upon the man who would practice upon such professions and principles with unmitigated contempt, and build a loftier name, though it be an humble one, and carve it high on the tallest pillar of renown—and that name, though its owner may move in the lowest walks of life, and lie upon the dead level with the general mass, and be despised by the dazzling sons of opulence and bloated ease, whose eyes stand out with fatness, is the name of an honest man—the brightest uninspired the sun ever shone upon in his meridian splendor, and better far and prouder than those which spring from carnage covered fields, and all the glory of titled ancestry or regal fame.

And here I might dilate with pleasure, upon the duties of the farmer in the settlement of accounts and collection of debts. It has ever appeared to me, that too much strictness—or in other words, too exacting a spirit was beneath the real dignity of the profession of farming, which is liberal and noble in its very nature. A spirit of liberality should be encouraged,—it should be taught to our children; where they do not naturally possess it. It should ever be remembered, that all men do not think alike, and that slight differences will occur, in matters of opinion, and especially in matters of account. What I wish to see inculcated is, that generous spirit which will overlook trifles, and yield much for the sake of the peace of the neighborhood. I do not mean that they should yield great rights or privileges—by no means—but I mean in the adjustment of small neighborhood matters, that it is better to lose a trifle, than to contend for it—it is better to yield a few dollars, than to lose a neighbor—it is better to settle amicably among yourselves, even at a small sacrifice, than to adhere pertinaciously to your rights and seek redress in court—where the accruing costs will be greater than the original demand. It is better to yield it for the sake of peace—for the sake of your own dear interests too.—It used to be a common remark in Mississippi: that I will have what you owe me or blood. This lawless spirit has given way to the sound dictates of common sense. Thank God! those days have past, and a spirit of sound and liberal morality, in opposition to the all-grasping spirit of avarice, has been breathed upon the land, and peaceful quiet, and law abiding people, are now the possessors of the soil. The farmer in particular, has the greatest stake in the preservation of order, and in the mild reign of the law, and he should enter his protest against all neighborhood strife, and show by his conduct that he places a just estimate upon these invaluable blessings. I know it is regarded by some that so a man is honest, it matters little how close he settles. This is not my opinion. No man should be too exacting. He does not feel so well—he does not so completely receive the approbation of his conscience, by being rigid and griping in his dealings, as does he when his conduct has been characterized by a generous and liberal spirit—a spirit that is above contending about trifles, and that would throw them rather to the moles and the bats.

In this connection, I cannot urge too strongly the necessity of a proper understanding in all cases where there are dealings between man and man. If this were more frequently attended to, our court houses would not be so frequently crowded with farmers and their witnesses, to the destruction of the peace of neighborhoods; and to the pecuniary disadvantage of both parties.

Look around you at the affluence which blesses your professional men, your lawyers, and clerks, and magistrates and sheriffs. Did they acquire their fortunes by the cultivation of the soil—not at all. In a great measure the misunderstandings of the people have caused them to grow rich. Are those gentlemen to blame? —no! no! If the people will throw their honest and hard earnings away, they had as well get them as any body else. I have heard of a debt of $14, costing, by the animosity of the parties, $3,000; when the arbitration of neighbors, or the liberality of the parties themselves might have settled it out of court.

Another thing of vast importance, in the settlement of difficulties is, confidence in the honesty of your adversary—confidence begets confidence, just as naturally as distrust begets distrust. A suspicious and cross-grained man will mar the peace of families, and distrust the repose of neighborhoods, and sow the seeds of discord broad-cast through the earth. Such a man should be met with an open, frank and confiding spirit—and it will have the tendency to produce the like spirit in his own bosom. By such a course the whole man may be changed.

I have heard it gravely argued, that you should do as you believe your neighbor would do under similar circumstances. Thus you are to begin by attributing villainy to him, and end by being a villain yourself How different was the immortal doctrine of Christ! On how much more noble feelings was his golden rule based. The selfishness of the human heart was duly considered, and that very selfishness was made the test of honesty. He went into the human heart, and inquired what would your selfishness and self-love dictate that he should do to you—that is the rule of your conduct then to him.

The farmer too should remember the poor in mercy. He should be mindful of their interests on whom the desolation of poverty has come with a blight and a mildew. He should not grind the face of the poor, but should raise the bowed and broken down in spirit. He should remember the kind and gentle conduct of Boaz to Ruth, and leave the subsistence to the gleaners. Charity is like the soft dews of Heaven. It is twice blessed—it blesses him that gives. It is the high prerogative of the generous and liberal farmer to ascend to the throne of Heaven in deeds of benevolence—and to make his goodness and his usefulness as expansive as his existence.

But he should not only be honest and industrious, and economical and liberal—he should be a married man. This is absolutely necessary for his happiness. He may live without the smile of partial beauty won, and may be respectable—it is possible that he may practice all the virtues of an honest farmer, but when he turns to his home, how his heart sickens within him, when he reflects that that home is not consecrated by the presence of one whose thoughts, feelings and taste, are harmonious to his own, and who is ever ready to welcome him with a smile after the labors of the day. And then, after he reaches that home, follow him if you please into his desolate dwelling, unenlivened by the caresses of his family, and unadjusted by the plastic hand of lovely woman—all is disorder and confusion—confusion worse confounded. His home is a dreary and unprofitable waste, a barren garden where no verdure quickens, a wretched excuse, where all the freshness and purity and warmth of affection, languishes and dies for the want of congenial objects to call it forth and give it life and animation. But let that old bachelor marry, and the whole scene is reversed, as if by an enchantress' wand. Aladin's lamp had not more power in transforming scenes and giving to them beauty and brilliancy, than does the presence of an affectionate and intelligent lady transform the dullness and desolation of a bachelor's domicil into the fascinations and enchantments of matrimony. Order seems to spring up at her approach, and economy reigns throughout the household as a presiding genius. The whole scene is reversed—and a cultivated garden, a parterre of unrivalled flowers, wafting their sweetness through the remotest chamber—a well-ordered and well-set table of the choicest viands are presented in the stead of barrenness and scantiness, and slovenliness, at which the heart mourns in sackcloth and ashes at their bare enumeration. But who can recount the unnumbered blessings that cluster round that fond word home, when blessed with woman's presence? It would be an easier task to count the stars that deck the firmament at the midnight hour—or to number the sands upon the shores of the sea. It is sufficient to assert that no farm can be properly conducted, without the aid and advice of a wife. They are our best and safest counsellors at all times—they are the truest economists, and I attribute one half the distress of the land to a disregard of the counsels of our wives and mothers. Who ever heard of a wife recommending her husband to go in debt, or to speculate? No, no! their advice was constantly urged to the contrary, and

the men as constantly disregarded it. Judgment had fled to brutish beasts and men had lost their reason. They slighted the still small voice of reason, and took the mild bit of restraint in their mouths and ran lawless through the wild field of speculation.—And the sad result is, the overthrow of many estates and the reduction to poverty of thousands who were born to affluence. The first return to good sense that was witnessed in Mississippi was the passage of a law by the Legislature, giving certain rights to married women—rights which would protect them and their children from the world's cold charity, and all the ills which poverty brings in its train. To the farmers I most confidently say, marry, and listen more to the counsels of your wives. Let their bosoms be the repository of your secret circumstances, and they will not run you in debt. If they have ever been extravagant, it is where they thought their husbands could afford it, and their husbands through mistaken pride, failed to expose their real situation to them. They are our best friends, and friends whose counsel has never betrayed or led to ruin. Hearken then to the voice of those whose interest is identical with your own, and who are not so easily led astray by the visionary schemes of the mere speculator as yourselves.

But as invaluable as the ladies are as counsellors, their merits rise to perfect admiration when contemplated as nurses round the couch of sickness. There they shine with peculiar splendor and unrivalled excellence. When the hand that adjusts the pillow and presses the throbbing temple, and the eye that looks into yours with an interest that cannot be contemplated, and the voice that melts into tenderness as its tones soothe the anguish of pain, is that of affection and love, woman becomes an angel on earth. Oh woman! in our hours of ease, uncertain, coy and hard to please, and variable as the shade by the light quivering aspen made, when pain and sorrow wring the brow, a ministering angel thou.

The farmer should set good examples to his children also. He should inculcate truth as a jewel of rare value, and should be devoted to their education. By industry and economy, he will unquestionably be able to bestow good educations on all of them. It is too frequently the case that farmers educate a portion of their sons for the professions, and leave the mental field of their farming sons uncultivated. This is wrong in every point of view. It is yielding the point at once that those professions are more honorable than the calling of the farmer, which I deny. He stands in the foremost rank, and should be educated as high as the best. I might go further, and say that the profession of farming is the most honorable that man could follow, but I should regard such a speech as anti-republican in its character. I am content in asserting that none is more honorable, and that as a class none are more respectable. If there are exceptions, the fault is with themselves and not in the calling. If we are underlings, the fault is in ourselves and not in our stars. We, for I speak of farmers, should take that rank which nature intended we should occupy. We should remember that the father of his country was a farmer, and that without derogation from other professions, it will be admitted on all hands that he stands on the page of history without an equal —without a model—the pride of every land, the glory of every age.

When our republican institutions are remembered, and the fact that all offices are open to all men, and that "worth makes the man and want of it the fellow," it is astonishing that more attention is not paid to the culture of the mind of the most numerous class of citizens. Farmers should not only have good educations, but they should be early taught a free and easy mode of expressing their sentiments in public. They should not entrust the keeping of the archives of our liberty and its sacred vestal flame to the learned professions alone, but they should become candidates for their possession and rivals in the race of eminence. They should aspire to office more frequently than they do, and become familiar with the mode of conducting public business. They are the bone and the sinew of the land, their country's pride and their country's boast—and, if properly enlightened, should have a more correct idea of their public wants than any other class. They would be wiser and better voters, and we would not so frequently see our public councils darkened by the promotion of unworthy men to office. Our high places would not be so frequently filled by the mere demagogue, whose trade or whose livelihood is politics—but they would be filled with sober, talented, business men, "who know their rights, and knowing dare maintain." The farmer, then, should begin a liberal system of improvement in the education of his children. Every motive that can influence the human heart, operates upon his with unspent force and vigor. The genius of liberty appeals in the moving pathos of patriotism, by the holy devotion of country, in behalf of education. It is the foundation of our country's greatness and the hope and assurance of its independence and perpetuity.

Farmers should read more—not merely books, but newspapers, political, agricultural, literary, and religious. Every family should take a newspaper. It makes children fond of reading, and gives them a knowledge of the affairs of the world that it would take years to acquire in any other mode. And at this day, the press can afford intelligence at so cheap a rate that every family can bear the price of at least one newspaper. If the plan were adopted of cutting off the use of some useless habit, how many papers would it introduce into the neighborhood? For instance, stop the expensive and filthy practice of chewing tobacco or smoking, or drinking, or any other custom which is so useless or unnecessary, and devote the money to the purchase of newspapers—how much better it would be. How many farmers' wives and children would rejoice at the exchange, no man can tell. It would be a most happy result, and one that would redound to the immortal honor of him who would start it—and after it has been commenced, a good way is to exchange papers with your neighbor—by that means you double your information and do not increase your expense. I hope a suggestion so fraught with interest and enjoyment will not be neglected, but put into immediate requisition.

From the American Farmer.

WET LANDS.

We have frequently recommended the draining of all naturally wet lands, and we will here repeat our advice, as it is impossible to realize good crops from soils which remain in a state of super-saturation for a considerable time after every fall of rain. Many, we are aware, are deterred from subjecting their lands to this operation through fear of the expense; but this consideration should not be permitted to prevail, as the cost of draining, if properly executed, would not prove the scare-crow which many apprehend, as a large portion of the labor could be performed with the plow, the shovel being at the most required to throw out the loose earth which could not be extricated by the former implement, until the drain should get to be a foot deep.

With regard to the kind of drains, we have no hesitation in saying that we should prefer *covered ones*, which could be formed with very little labor. Suppose the drain should be cut 18 inches or two feet deep, and the same width, all that would be necessary to make one that would last a life time, would be, to lay on either side of the drain chesnut, cedar or locust poles, 4 inches in diameter, the ends made to fit plum up to the ends, then to lay blocks of the same materials, close together across them; on these let pine or cedar twigs, or long unbroken straw, be placed, to prevent the earth from falling through the interstices and choking up the drain; then fill up the drain, taking care to preserve at least a foot between the surface and filling in, so that the plow would not displace the poles in after culture. Indeed, where neither chesnut, locust nor cedar poles could be obtained, those of pine would answer, and last for twenty years.

In England, Scotland and Ireland, where draining has been longest followed, and best understood, the most decided advantages have been derived from the practice. There lands, of comparatively little value, have been, by the operation of draining alone, rendered not only available for every kind of crop, but eminently productive; and soils which had been looked upon as among the most heavy, tenacious clays, have been converted into pliable loams.

With regard to the distance at which the drains must be cut apart, that must depend upon the quantity of water to be passed off. In most cases, from 18 to 22 feet has been found a sufficient and safe distance. The drains across the field should be made to empty into others of bolder dimensions, at the terminating points, which should be of sufficient capacity to receive all the water which may be discharged into them. Care should be observed too, to preserve a proper level, so that the water may pass freely throughout every part of the drain.

We have no doubt that, by such drainage of heavy clays, given to excessive moisture, that at least fifty per cent. of the labor of tillage might be economised, twenty-five per cent. of productive capacity be added to them, and lands which are only now fit for grass culture, and not peculiarly adapted to that, might be transformed into soils fitted for the growth of every description of vegetables, from the turnip to the corn plant.

With regard to the quantity of such ditching, which can be done in a day, we have no hesitation in advancing the opinion, that the materials on the ground and deposited in place, that four men, a good team, a plow and three shovels, could perfect a mile in length in a day, *provided they were superintended by their employer*, and we would not advise any one to undertake such labor, unless he gave to the operation his personal attention during the whole time. His presence, judgment and direction, would be more than equivalent to the work of two laborers; besides the assurance he would have that the work would be well and effectually done. There may be, and doubtless are, hands that do not require watching, though we are forced to confess that we have never yet seen them; for, so far as our experience has gone, and we have not had a little, the chief aim in most of them is more directed to the killing of time, than in the employment of that time in good old-fashioned honest occupation. This may be considered by some as a harsh judgment, but if we had not so pronounced it, we should have been lacking in that candor and frankness which has been our rule through life.

From the New York Central Farmer.

TAKE CARE,

Should be the watchword of every farmer. There is no time to dispense with it, from the first day of January to the last day of December. And yet some would judge, from appearances about the premises of some farmers, that they hardly knew that those two words belong to the English language. To take care of anything, whether it be buildings, fences, crops or animals, seems never to have entered their minds as a thing of any importance. And even among those who would probably like to be called pretty good farmers, there is too often a manifest disinclination to *take care*. But, although they are two small words, and quickly told, the good or ill success of every farmer, depends in a great measure upon the observance or neglect of them. No great number of acres, nor any amount of hard labor, will enable any man to dispense with them. If you would even raise a flock of chickens, you must *take care* of them. But little time is required to raise a hundred, provided you have the necessary conveniences for taking care of them.

If you wish to raise a litter of fine, thrifty pigs, *take care* of them. While they run with their mother, she must have *enough* to eat, of some-

thing: when you take them off, they must be fed not once or twice a day only, but five times at least—not twice as much as they can eat at a time, but just as much as they can eat, and no more.

If it is your intention to raise two or three, or half a dozen calves, you may as well have good ones as bad ones—only *take care* of them. In the first place, breed from the best stock you have, or can produce, and then feed regularly with a sufficient quantity of *some thing*, not so much matter what: they will readily learn to eat almost any thing—sour milk, or whey, with a trifle of meal, answers a good purpose, only let it be regular as to time and quantity. "This tampering and stuffing and overfeeding," as Mr. Bement says, is not the thing—it is not necessary. *Good stock* can be raised without it, even from our native soil. But a little *care*, especially the first summer and first winter, they must have.

If you wish to have your fodder hold out well, *take care* of it. Have every animal in the stable if possible, not only nights, but cold stormy and windy days—feed little at a time and often, not only night and morning, but through the day.

If you wish to increase your quantity of manure, *take care* of it. Keep your cattle close in the yard, and put up eave-troughs to carry off the water, so that there may be as little wash as possible. If there is a drain at one side of your yard where all the moisture runs off, try and prevent it. A speaker in a late agricultural address says, "you may as well have a *hole in your pocket*, as a drain from your barn yard." If you would raise good crops, *take care* of them. They must be fed as well as your cattle; or they will not grow. Plow thoroughly, to cut and cover won't do, neither will you have a great crop of grain, and a *very* great crop of weeds at the same time. Have an eye to your fences; if a board gets loose, or a rail is ready to tumble off, try to find it out before your cattle do.

If you have a family of children growing up, to take your place in this busy scene of things, when your race is run—you would probably be glad to have them become wiser and better men and women, than their father and mother were before them—then *take care* of them. Feed and clothe their bodies decently, but don't forget to feed their minds. Give them all the opportunities of a good and substantial education within your power. And whether they be male or female, and whether you expect to leave them rich or poor, learn them to *take care*.

From the American Agriculturist.

MANURING STRAWBERRIES.

There appears an undue fear of manuring strawberries. I have read somewhere that all plants that throw out suckers or runners rapidly deteriorate the soil, and that a power of escape to new ground is given by the runners. If this is correct, it is a reason for the good results I have always seen of manure. How rarely, except where strawberries are grown for profit, do we see room enough given. Beds of strawberries are objectionable for this reason, and it is this cause rather than manure that leaves are more abundant than fruit. I have tried and proved this. Where strawberries are grown for profit, (that is, grown at all in the true sense,) they should be planted in rows—the large sorts not less than 30 inches in the row, and 15 inches from plant to plant, and no runners suffered to remain. By these means, with deep trenching and early planting, any sort worth cultivating may be grown large and abundantly.

Obituary.

From the Albany Cultivator.

DEATH OF WILLIS GAYLORD.

A bright light has been extinguished in the death of our associate and friend, Willis Gaylord. He expired at his residence, Limerock Farm, Onondaga county, on the 27th of March, in the 51st year of his age. An aged mother deplores the loss of a most devoted son, over whose fragile form she had watched with all a mother's tender care for more than fifty years—a brother and sister weep for one who had ever manifested for them the most heartfelt affection—and his friends, and none more than ourselves, mourn the loss of one, beloved alike for his genius, his faithfulness, and the happy temper of his mind; while the American farmer has to regret the sudden departure of one who has labored zealously and successfully for years to promote his interest, to enlighten his mind, and to elevate his calling to that dignity and respect to which it is so justly entitled. His death was sudden, and to his family, as well as to us, most unexpected. He was taken with a bilious affection of the stomach on the night of the 25th. The next morning a physician was called in, and remedies were administered, which it was thought would afford relief. No alarm was felt, as no immediate danger was apprehended, till early on the morning of the 27th, when it was discovered that his life was rapidly drawing to its close. At 9 o'clock, thirty-three hours after the commencement of the attack, he sank gradually and gently into the arms of death without a groan or a struggle. He had been for more than thirty years a worthy member of the Presbyterian Church, and the hopes and consolations of the gospel had enabled him to endure, not only without a murmur, but with a buoyant and cheerful spirit, an amount of bodily suffering which falls to the lot of but few.

Mr. Gaylord was born in Bristol, (Conn.) in 1792, and removed with his father's family to Otisco, in this State, in 1801. This town was then almost an unbroken wilderness, but three families having preceded that of Mr. Gaylord's father. Young as he was, the deep, dark and majestic forests, as he entered them, at the beginning of summer, made an impression upon his mind, and excited a love for trees, which was never effaced. He always spoke of them with enthusiasm. In a letter, written but a few weeks before his death, he says—"When we entered these forests, the heavy foliage wore its freshest green, and the elm, the maple, and the linden, were successively laden with flowers; and never shall I forget the rich, the indescribable perfume which filled the air, as tree after tree was cut down, and day after day passed away before the blossoms had ceased to exhale their odors from their withered cups." Deprived as he was, by this removal, at the age of 9 years, of the advantages of even the District Schools of his native State, he was soon after visited with an affliction which prevented his reaping the benefits to be derived from the establishment of the similar institutions which are sure to rise up in all new countries, peopled by emigrants from New England. At the early age of 12 years, he was attacked with a violent rheumatic affection, which resulted in a curvature of the spine, and unfitted him, in all after-life, for any active or laborious pursuit. His innate love of knowledge, however, was such that no bodily infirmity or ordinary obstacle was permitted to dampen his ardor for its acquirement. Being unable to attend school, he studied such school-books as were to be procured at that early day, carefully noting such parts as he could not alone surmount, till he could obtain the assistance of some one who was able to solve his difficulties. He not only read with avidity, but *studied* all the books which came within his reach. He was remarkably fond of rural scenery, and when the weather would permit, it was his delight to sit for hours under the shade of trees, and cheered by the singing of the birds, pursue his studies with pencil and paper in hand to note the current of his thoughts.—While thus engaged in the pursuit of knowledge, and in the enjoyment of such a degree of health as permitted him occasionally to engage in the lighter labors of the farm, he met with an accident, slight indeed at first, but which entailed upon him a vast amount of suffering, and rendered him almost as helpless as a child to the day of his death. It was occasioned by a fall, from which, at the time, he noticed only a slight bruise on the left arm. It afterwards swelled, and became a running sore, causing the decay of the bone, and rendering his arm forever after entirely useless. This affection of the arm continued for about a dozen years, and when it healed an abscess occurred in one of his sides, which continued, with occasional alleviations, till his death. Notwithstanding the pain he was thus obliged to endure for a long series of years, which was sometimes excessive, he was ever cheerful and happy; and even under the most acute suffering, was never known to utter a word of complaint.

At the appropriate season, if his health permitted, he resorted much to the woods and fields. A favorite retreat was the shore of one of those beautiful lakes which adorn the western section of our State; and there, enjoying the charming view and inhaling the refreshing breeze, his mind was at once soothed and strengthened by a contemplation of the varied phenomena of nature. His was that happy constitution of mind which finds

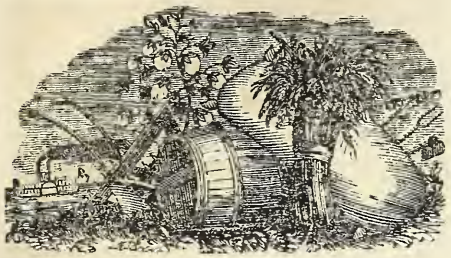
> "Sermons in stones, tongues in trees,
> Books in the running brooks,
> And good in every thing."

"Disqualified by these calamities from labor or active physical habits," in the language of one who knew him well, "he devoted his mind to study; and although suffering under severe bodily affliction, deprived of the ordinary facilities for obtaining information, without teachers, and by the aid only of such books as he was enabled at that early day to collect, he became a ripe and sound scholar, and eventually one of the most able and powerful writers of our times. For more than twenty years he had been a regular contributor to many of the American Quarterly and Scientific Journals, and in several instances to some of the most popular Magazines in Europe. His contributions to the newspaper press of this country, on almost every variety of topic, literary, religious, scientific, miscellaneous, and occasionally poetry, have been numerous and of the highest order of excellence. As a writer on all of these varied subjects, whether we regard the beauty of his style, the chasteness of his diction, or the invariable accuracy of his facts, it would be difficult to find his superior.

"The versatility of his talents, the rapidity with which he wrote, and the great number of his productions, have excited alike the admiration and astonishment of his friends.

"But the most valuable part of his writings, and for which he will be longest remembered, relate to the passion of his latter years—practical and scientific agriculture. In these departments he was thoroughly versed, as his contributions, commencing in 1833, to the old Genesee Farmer and the Albany Cultivator, will abundantly attest. The services he has rendered to the farming interest of the country have been immense, and form a legacy which will endure to a late generation. He was eminently practical and judicious in all his views and recommendations, and possessed a happy tact in communicating his impressions to others. To the readers of the Cultivator, and to the agricultural community, his loss will be irreparable.

"Isolated and excluded as he was by physical infirmity and location, from a general intercourse with his fellow citizens, there are consequently but few who can justly appreciate his many social qualities. Thoroughly informed on almost every subject of general or individual interest, he was always ready, as it was his delight, to impart to others who sought his society, the rich treasures of his well-stored mind. Those few and favored friends, will long and fondly cherish his memory. As a man, his philanthropy knew no bounds. He studied and labored emphatically for the benefit of mankind. As a friend, he was true and faithful; as a son and a brother, kind and affectionate. When a man of such gifted powers and universal acquirements, in the full maturity of his intellect, and in the midst of his usefulness, is cut down suddenly and removed from among us, we may in truth mourn a public bereavement."



WEDNESDAY, MAY 15, 1844.

PATENT OFFICE REPORT.—We make our acknowledgements of the Hon. H. L. ELSWORTH, Commissioner of Patents, and the Hon. A. H. STEPHENS, for copies of the Annual Report made by the former to the present Congress. Like his former valuable report, it contains much matter of lively interest to the Agriculturist; from which we shall, in our future numbers, make such extracts as we deem of interest to our readers.

From the American Farmer.

LARGE YIELD OF CORN.

The Farmer's Visiter gives the following account of a large yield of corn, grown in the District of Columbia; which shows that even an indifferent soil may be made by manure to send forth abundance of the fruits of the earth. The quantity of manure used was to be sure heavy, but when the difference in the price of the labor of cultivating but 4 acres, instead of twenty, is considered, the account of cost will be pretty nearly balanced, without taking into consideration the difference in the value of the land after the crop was grown :

"The capacity of the soil in and about the city of Washington, is demonstrated by an experiment of Mr. Hickey, a Clerk in the office of the Secretary of the United States Senate, who resides about two miles from the Capitol, near the turnpike road leading to Bladensburg. Mr. H. has a family of slaves by whom, overlooked by an Irishman, his labor is performed. The last year, instead of pursuing the old practice, and going over some twenty acres to be planted in Indian corn, producing at the rate of two to three barrels to the acre, he prepared and planted only four acres. This land he manured at the rate of about 120 small horse cart loads to the acre, plowing the ground more than once until it was well pulverized. The ground was furrowed in rows at four feet distance, and the hills in the rows were suffered to stand two feet apart with three stalks in a hill. A practical farmer of the neighborhood is of opinion that the crop would have been larger if there had been two instead of three blades in a hill The corn in Maryland is of much higher and larger growth than the New England corn, and requires a less number of blades and a greater distance to the hills. In the lighter lands, they have only a single blade to the hill, and the hills four feet distant—in the better lands two blades at the same distance. Mr. Hickey's field was three blades at only two feet one way and four feet the other. Had not the season been peculiarly favorable for corn, Mr. H. now thinks his crop would have been a failure, from the too great number and contiguity of the blades. But his crop turned out to be an uncommon one—22½ barrels of shelled corn, (five bushels to the barrel,) on one acre, and 20 barrels to the acre on the three other acres—making his whole crop 412½ bushels.

The largest producing acre was upon a young apple orchard, which had but now commenced bearing, and produced besides the corn with the growth of the trees, about ten bushels of choice apples. It may be readily perceived that the four acres of ground is now in a condition to produce double, and perhaps treble crops, without further manuring from three to five years. How great must be the gain of capital and labor expended on such improved cultivation."

☞It is in Agriculture, as in every part of creation, a wise and paternal Providence has inseparably connected our duty with our happiness.

☞A correspondent of the Prairie Farmer, says a lady of his acquaintance colors wool and woolen goods, blue, with *purslane*, a common garden weed—that the lady assured him it was equal in every respect to the best indigo blue.

ASPARAGUS.—For manure, guano mixed with sea-salt, and applied in a liquid form, has proved most beneficial.

☞The eye of a master will do more work than both his hands. Not to oversee workmen, is to leave them your purse open.—*Franklin.*

VALUABLE SALVE.—Take three carrots and grate them; place in a vessel and cover with lard, without salt. Boil thoroughly, strain, and add sufficient beeswax to make a paste. This is a most invaluable ointment or salve, for cuts, burns, scalds, or wounds of any kind.

BROOM CORN.—The Connecticut Farmer's Gazette says: Immense quantities of broom corn are raised on the Connecticut river, in Massachusetts. It yields about 1000 lbs. of brush, and 60 to 70 bushels of seed to the acre. The brush sells for 5, and sometimes as high as 12 cents the pound, and the seed at 33 cents per bushel. Its cultivation is like that of the Indian corn.

MANURE FOR MELONS.—The London Gardener's Chronicle says: It is contended that hen-dung is equal to pigeon-dung, in producing a large quantity and fine quality of melons.

☞When we take people merely as they are, we make them worse; when we treat them as if they were what they should be, we improve them as far as they can be improved.—*Goethe.*

HAPPINESS.—An eminent modern writer beautifully says:

"The foundation of domestic happiness is faith in the virtue of woman: the foundation of political happiness, a confidence in the integrity of man: the foundation of all happiness, whatsoever, temporal and eternal—reliance on the goodness of God."

From the New Genesee Farmer

ORLEANS COUNTY PREMIUM CROP OF INDIAN CORN.

Asa Williams, Jr., of the town of Barre, in the county of Orleans, having received at the last annual fair of the Orleans County Agricultural Society, the first premium awarded for the best acre of Indian corn, makes the following statement of the manner of cultivating the same, soil, seed, &c.:

The soil was gravelly loam, containing a good portion of black vegetable mould. I planted in corn stubble: it was first plowed in the spring of 1842, having laid in pasture ever since it was cleared, some twenty years since. It was a swale, and had been ditched and drained the year before it was plowed. In the spring of 1842, I spread on about twenty-five loads to the acre, of well rotted barn-yard manure. In the spring of 1843, I put on, and plowed under, about the same quantity of the same kind of manure; plowed it twice—one each way, about the 6th of May: about the 10th, planted on the furrows, in rows about two feet apart, and hills about one foot apart in the row—three kernels in each hill. It was hoed three times, making as little hill as possible, and no cultivator or drag was used on it. It was cut up by the ground, about the 15th of September, and put up in shocks or stocks on the ground. The committee of the Agricultural Society came to the field and measured off one acre: they counted the rows in the acre, and then selected one row, which they deemed to be an average row. They then appointed a man to husk and shell it: when that was done, the product was measured, and the crop on the acre from the product of this row, was estimated at one hundred and fifty-seven bushels and thirty quarts, by measure; and by weight, at one hundred and fifty-four bushels and twenty-one pounds.

I would add, that I personally superintended the harvesting of the whole acre measured, and have no doubt but it would average the product of the row that was measured. The seed used in planting, was what is called the white red-blaze—eight rowed.

ASA WILLIAMS, Jr.

Barre, April 10, 1844.

REMARKS.—The foregoing statement was furnished at our request, in order that the county of Orleans might have the credit of having produced one of the largest crops of Indian corn on record in the annals of agriculture in the empire state. It is a great pity that the whole crop was not accurately measured and attended to, so that it would have obtained the premium of the State Agricultural Society, and so that those who read the account would not feel inclined to doubt its accuracy. From our own knowledge of the parties concerned, we have full confidence in their integrity; but at the same time, we are aware that the statement shows such an extraordinary product, that many farmers will think there is some mistake, or deception about it. We know, however, that Orleans County contains some of the best corn land and best farmers in the State; and as other counties claim to have produced crops equal to this, we see no good reason why, with a favorable season, and improved mode of culture, we may not advance a *leetle* beyond all that has been done before.—We have always contended that *perfection* has not yet been reached, in the culture of this, and other crops.—ED.

From the New Genesee Farmer.

HOW MY FRIEND COOK RAISES WHEAT.

Few farmers in our county raise as good crops of wheat, and none better, than Mr. Ira Cook, of Byron. His method is a good one, and can be adopted by any farmer in the wheat region. It also proves that the same crop may be grown upon the same land for any number of years, and at the same time have the land constantly improving in value. The whole secret is, deep plowing, gypsum and clover. He stocks his wheat ground in the spring with clover, and sows on plaster. The next spring the clover is plastered again. When up, rank and heavy, he goes on with a strong team, and turns under the clover, and sows on his wheat. He says he has turned under clover that would yield at least two tons of hay to the acre: and he further says that from his own knowledge the land will bear a heavy crop of wheat every other year, and still improve in fertility. Wheat can be raised in this way at much less expense than in any other, as summer fallowing can be dispensed with entirely.

Mr. Cook also pays great attention to his garden, and has his privy so constructed as to be able to save all the night soil, or contents of the vault. He keeps a pile of sand handy, and occasionally throws in sufficient to keep the vault dry. This is every year applied to his garden—and a most excellent application it is. I think muck, if at hand, would be better than sand, unless the sand was quite loamy. Any kind of light earth that is fit for a garden, will answer the purpose, and should be used; for

truly manure is the farmer's mine. He is about doing another very wise thing: and that is, to build a cistern in his garden, into which all the wash of his kitchen will be conducted; and this he intends to apply upon his garden in a liquid state. And thus he has a very valuable garden. However, every farmer can do as much as Mr. Cook has done; for it is within the means of every one to save all their manure and apply it to their crops in a safe and judicious manner. But as I hope some day to visit Mr. Cook, I shall say no more about him now.

Speaking of manure, reminds me of a little experiment I tried the other day; and it may be of service to others to know it: I noticed a manure pile near one of the stable-doors to be in a high state of fermentation, and sending forth a dense vapor. The pungency of the odor clearly showed that a large quantity of ammonial gas was escaping. I had a quantity of ground plaster scattered over the heap, sufficient to make it quite white, and in a very short time the vapor ceased to appear. The plaster was changed in color perceptibly. This only shows that the theory of plaster's absorbing ammonical gas is true, and that the practice that has obtained to some extent of sowing plaster on compost and manure heaps, and upon dry meadows and pastures, as well as strewing it liberally in stables, is a very excellent one, as it fixes the ammonia which is the very essence of manure. The whole becomes a new compound, and easily dissolved in water, thereby rendering it more nutritious to the growing plant.

Deep plowing is a great thing to help keep up the good condition of land, and to insure good crops. I don't mean four, five, or six inches, when I say deep plowing. I call it deep plowing, when the plow goes in beam deep. My neighbor Corbey has some excellent notions on that subject. He used to live in Ontario county, some thirty years since, and was lately back there on a visit. He told his friends they did not raise such crops as they used to when he was among them, and pointed to the stubble as a proof. In those days seventy bushels of corn to the acre was no uncommon crop. He told them that it was not so much the want of fertility in the soil, as it was the want of good judgment in its management. When he lived there, they used to plow their land with two yoke of oxen and a horse; now they used a span of light horses, and they ought not to wonder if they had light crops. If we skim over and skin the soil, the soil will skin us, as a great many farmers now find to their sorrow. P.

From the Albany Cultivator.

TO DESTROY NUT GRASS, &c.

Messrs. Editors—I see that a subscriber asks for information how to kill nut grass. If he means by it, that which has proved so great a curse on the coast of Louisiana, I would suggest as an experiment that a small plot of ground, say a square perch, be taken, and sow on it at the rate of 40 or 50 bushels of salt to the acre, and mark its effect, if it has that desired. I think that thousands of acres on both sides of the Mississippi would be reclaimed and be made even more fertile than at present. This much I can venture to assert: that it will not only kill that or any other grass that appears for some distance below the surface of the ground, but whether it will extend its salutary effects to the bulb or not, must be proved by the experiment. It has this advantage: that it can be tried at but little expense.

Acclimating Cattle.—Whilst I am scribbling, I might suggest to a Southerner, who requests information, in last year's vol., about acclimating the improved breeds of cattle, that my opinion of the great difficulty that occurs, does not arise so much from the change of food or climate, as the state of irritation and fever that they are kept in by the incessant attacks of the horse flies and mosquitoes, so that they can get no rest by day or night. Now I think that may be obviated by sponging them in a steep of the leaves of the black walnut, tomato vine, or many other strong and pungent leaves, or a solution of soot might answer, as any man in the South knows how repugnant the smell of soot is to the insect tribe, particularly to the mosquito. Mago.

From the New Genesee Farmer.

GOOD BUTTER.

The season is now at hand for making butter; and I wish every farmer's wife and daughter would try to make a better article than was ever seen before. It is just as easy to make a nice, good article, as to make a poor one; and it is certainly vastly more for the comfort of the consumer. Take pains—churn your cream before it gets bitter, and skim your milk before the cream gets any bad taste; work it well, but not too much; get the milk out and the salt in with as little delay as possible; use only the finest and purest rock salt, or the solar salt of our own springs that has been ground. A great deal of good butter is spoiled by the salt; and many a good butter-maker has been blamed when it was no fault of hers. When butter is put into firkins, it should be pounded in with a layer of salt on the lower head, and an inch of strong pure brine on top of the butter; and the firkins should be made of thoroughly seasoned wood—white ash, oak, beech or hemlock, but it must be seasoned. A great loss is sustained every year by putting butter in unseasoned packages. To make good butter, it wants care, cleanliness, and good salt; and plenty of salt at all times for the cows. Let us all have good butter this year. P.

From the Massachusetts Ploughman.

TIME OF SPREADING MANURES ON GRASS LAND.

A correspondent asks our opinion as to the most proper time for spreading manures over grass grounds?

We are decidedly in favor of spreading in November in preference to any time whatever in the spring season. We commonly lose a large part of our manures when we spread them at any time on land that has long lain in grass. But as there are many natural meadows that cannot be easily plowed, we dress them by an application on the surface.

Many farmers near Boston spread manures on their grass fields as late as May; and if the month holds rather dry, they find but little benefit from it. Within our own observation, there are instances of such spreading which has positively proved detrimental to the harvest. In a wet season, it will operate better; but almost any kind of application in the spring is apt to come in the way of the scythe and of the rake.

The best time is November, when the application is less liable to dry up or evaporate.—Much loam or other matter should always be mixed with manure that is to be spread on the surface of mowing lands.

From the Connecticut Farmer's Gazette.

LIMA BEANS.

To have a good vegetable garden, should be the aim of every man, and woman too, who has the occupancy of a *patch* large enough to make one. Many people seem to think that vegetables are vegetables, and it matters not what is the quality, if in quantity they do not fall short. We would remind such that some good things are a great deal better than some other good things—and among the best of garden vegetables, we class the Lima Bean. It is a tender plant, and needs careful culture. Plant from the middle to the last of May; having the soil made rich and deep, cover slightly with fine mould, and set the poles at the time of planting. For *succatash* in summer or winter, there is no variety that can be compared with the Lima.

Remedy for Hard Milking.—Mr. Kniskern, of Knox, says that he has tried the plan of opening the teats of cows that milk hard, with a harness awl, or a small penknife, as recommended in a former number of the Cultivator, by Mr. Durand, and has by this means made a very good milking cow from one which could scarcely be milked before.—*Alb. Cult.*

Corn and Crows.—As the season for corn planting is approaching, it may be of service to know how to prevent the depredation of crows. Take after the rate of one pound of copperas to a bushel of seed corn; dissolve in water, and sprinkle the corn with it: the corn may at the same time be rolled in plaster. This experiment has been tried now for three years, with great success, by a veteran farmer, and he permits it to be handed us for publication.—*Springfield paper.*

To Destroy Catterpillars.—As soon as the nest can be seen, procure some pure spirits of ammonia, tie a small piece of sponge to a pole that is long enough to reach the highest nests, fill the sponge with ammonia, and once filling will be sufficient to rub off and destroy from 30 to 40 nests.—*American Agriculturist.*

CONTENTS OF THIS NUMBER.

Communications.

Culture of Cotton,.....page 73
Spaying Hogs..... 74
Whitewash..... 74
General Observations, by D. Bradwell..... 75

Selections, Extracts, &c.

Selection of Seed; Cotton Premiums; A good plan of making Manure..... 75
Essay on the interests and duties of the American Farmer,.....76
Wet Lands; Take Care.....77
Manuring Strawberries; Death of Willis Gaylord...78
Editorials, etc; Large yield of Corn; Orleans county Premium crop Indian Corn; How my friend Cook raises Wheat.....79
To destroy Nut Grass; Good Butter; Time of spreading Manure on Grass Land; Lima Bean; Cure for Hard Milking; Corn and Crows; To Destroy Caterpillars..... 80

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From the Baltimore American.

ANNUAL REPORT OF THE COMMISSIONER OF PATENTS.

The last annual report of the Hon. HENRY L. ELLSWORTH, Commissioner of Patents, is a valuable document. It covers 335 large octavo pages, closely printed, and should be in the hands of every farmer, mechanic and manufacturer in the country. There were granted in 1843 no less than 531 new patents, and 446 expired during the same time. The applications for patents during the same period numbered 819. The whole number of patents issued by the United States, up to the commencement of the present year, was 13,523. The receipts of the Patent Office during 1843, were $35,315; the expenditures $24,750; the sum returned to persons making application, whose claims to patents were denied, $5,026. There were expended during the year, for the restoration of models, records and drawings, destroyed by the burning of the old Patent Office, $4,586.

The report estimates the present population of the United States at 19,183,583; increase since 1840, 2,114,130 souls.

A mass of information relative to the recent improvements in Agricultural processes, implements, machinery, &c., and in the useful arts generally, is embodied in this document, in a manner which commends the subjects treated of to the consideration of the reader in an especial manner. It abounds in Agricultural statistics; and among these we notice an interesting statement of the duties levied on the agricultural products of the United States by the different nations of the civilized world. The Agricultural products of our country for 1843, are estimated as follows.

Wheat, bushels	.....	100,310,856
Corn,	.....	494,618,306
Oats,	.....	145,929,966
Rye,	.....	24,280,271
Barley,	.....	3,220,721
Buckwheat,	.....	7,959,410
Potatoes,	.....	105,756,133
Flax and Hemp, lbs	.....	161,007¾
Hay, tons	.....	15,419,807
Tobacco, lbs	.....	185,731,554
Cotton,	.....	747,660,090
Rice,	.....	99,879,145
Silk,	.....	315,965
Sugar,	.....	66,400,310
Wine, gallons	.....	139,240

A full account is given of a process, hitherto a secret, by which butter may be kept for years, fresh and sweet, in any climate, which we subjoin:

It has been discovered that most kinds of wood contain considerable quantities of pyroligneous acid, which decomposes salt in butter kept in suchtubs. The linden, or bass wood, is the only one which, it appears by careful experiment, is free from it; others, it is stated, may be freed from it, and thus rendered suitable, by boiling three or four hours, well pressed under water. Much importance has always been attached to the preparing of butter, so that it will keep on board of ships at sea and in warm climates. A simple process is now practised, which is said to be effectual for this purpose; which is, to have good butter well churned, and worked and packed hard and tight in kegs of seasoned white oak; the head is then put in, leaving a small hole into which brine is poured to fill the vacant space; and of so much importance is it deemed, to prevent any bad taste, that the plugs for the hole must not be made of cedar or pine, but of cypress or bass wood, as otherwise it would be injured. After which, these kegs are placed in a hogshead well filled with brine of full solution, that will bear an egg, which is then headed up tight and close. The importance of this subject may be estimated from the fact that, as it appears, the standing contracts for butter, in our navy, that will keep at sea, are at twenty-six cents per pound, and for cheese twenty cents per pound. It is now put up of good dairies in Orange county, and keeps perfectly.

The appendix to the report contains a letter addressed to Mr. Ellsworth by G. Fox, Esq., a merchant of Hartford, Conn., corroborating the above.

The mode or process of making "Bommer's Patent Manure," which has been patented here, is described in the Report.

Accounts are also given of many new and valuable plants, and improved varieties of grains, grasses, &c., which possess no ordinary interest for the farmer.—Twelve thousand packages of seeds were distributed from the Patent Office during the last year, "and when we recollect," remarks the Report, "that the improvement of ten per cent. by the selection of seeds would increase the value of the agricultural products of this country, $30,000,000 annually, the attempt thus far made by this office must be deemed a good beginning for still more extended benefits."

Mr. Ellsworth makes mention of a hardy kind of *rice* which flourishes on the edge of the snows of the Himalaya mountains, and states that he has ordered some of the seed, which he hopes to receive before long for distribution.—The opinion is now entertained both in Europe and in this country that upland rice may be raised wherever Indian corn will ripen.

A very interesting account is given of an extraordinary grain called the multicole rye, raised in the west of France, the prolific qualities of which almost exceed belief. A few bushels of it, imported by Mr. E., have been distributed.

The report remarks that "the advancement of the arts from year to year taxes our credulity, and seems to presage the arrival of that period when human improvements must end." We annex a few extracts from the report respecting a few of the most important improvements and inventions of the past year:

In the operation of new furnaces recently erected in the Patent Office to warm it a curious effect is produced by particular ventilation, and deserves remark. Ventilation is often obtained through the ceiling only; but, so far as it respects rooms heated by hot-air furnaces only, this method is an incorrect one. If the temperature of the different parts of the room is tested by a thermometer, it will be found that the upper part heats first; and if no outlet is given, the draught of hot air ceases, the room being filled. Let an aperture be made at the top of the room, and the warffi air instantly escapes; but if an opening is made near the floor, the cold air within the room passes out, and the warm air descends to fill the space. An experiment, proving this, was tried in drying clothes in a room without ventilation, heated by air furnaces; the clothes that were in the upper part of the room dried well, while those in the lower part still continued moist. As soon, however, as an aperture was made for ventilation below, a draught was given to the furnace, the cold air expelled, and the clothes dried rapidly. The public will thus see how easily a serious difficulty in heating rooms may be overcome.

Some facts have been collected respecting plank roads. By means of a preparation, by exhausting the air, and then infusing sulphate of iron or other substances into the pores of wood for rail roads, it is said the wood has been rendered so hard that the iron wheel of the car leaves no trace after more than a year's use of this "metalic" wood.

By a valuable machine, with ten yoke of oxen and five hands, a ditch of suitable depth for draining lands, (14 inches deep, and 28 inches wide at the top,) ten miles may be excavated in one day, at an expense by contract, of not more than three cents per rod. A larger machine, with a greater number of oxen, will excavate a ditch three feet deep. The great importance of such an instrument on the prairies of the West will at once be seen and acknowledged.

The rapid improvement of the arts may help to account for the reduction of price as to many articles of manufacture, and especially in some that are usually ranked among the necessaries of life. Individuals now in Congress can recollect of having, thirty years since, purchased shirting at 62½ cents per yard, who the last year have bought that which was equally good for 11 cents per yard only.

Hoisery, too, is now made in this country with astonishing rapidity, by the aid of the power weaving loom—an American invention, and which has not yet been introduced into England. While there is a full day's work to knit by hand two pairs of drawers, a girl here (at $2 50 per week) will make, by the power-loom, twenty pairs in the same time. A piece 28 inches in width, and 1 inch long, can be knit in one minute.

The expense of manufacturing this article has thus been reduced to about one-tenth of the former method by hand-looms. The importance of this improvement may be estimated from the fact that the quantity of hoisery used in the U. States is valued at $2,500,000; and the stockings, woven shirts, and drawers made in this country, at $500,000.

The little article of hooks and eyes is another illustration of the same progress of inventive industry. Thirty years ago, the price was $1.50 the gross pairs; now, the same quantity may be purchased from 15 to 20 cents. At one establishment in New Britain, Connecticut, 80,000 to 100,000 pairs per day are made and plated by a galvanic battery, or the cold silver process. The value of the article consumed in a year in this country is said to be $750,000.

Another article very essential to the husbandman, *horse shoes*, furnishes a similar proof of the bearing of the progress of inventions. An improved kind of horse shoes made at Troy, New York, for some time past, is now sold at the price of only five cents per pound, ready prepared, to be used in shoeing the animal. At a factory recently erected, fifty tons of these are now turned out per day; and it is thought they can be made and sent to Europe at as good a profit as is derived from American clocks, which have handsomely remunerated the exporter.

We shall content ourselves for the present with a notice of another improvement, which the

intelligent author of the Report thinks a very important one—namely, the construction of cheap cottages of unburnt brick. Unburnt bricks have been found undecaved and sound in arches in Egypt which have even stood the lapse of 2000 years. The cottage erected by himself at Washington, in view of the Capitol, and which is two stories in height, stands well, appears as handsome as the best houses built of burnt brick, is warm in winter and cold in summer. The experiment has been successfully tried in Canada.

DANA'S PRIZE ESSAY ON MANURES.

Section Fifth.

Of the Action of the Salts of Cattle Dung.

Here it is we find ourselves thrown on a sea of opinions, without chart, compass, or pilot, if we trust to the conflicting theories which have been set up for land marks and light houses. Let us therefore, reader, trust to ourselves, aided by the little chemistry we have learned from the preceding remarks about the composition of salts.

I have endeavored to impress on your memory, that the term salt is very comprehensive. But then, to encourage one, it is also to be remembered, that salts are compounds of alkalies, earths, and metals with acids. Now the earths, alkalies and metals, may be united to each of the known acids, (and their name is legion,) yet you may not, by this change of acids, alter the nature of the earth, alkali or metal. That always remains the same; every time you change the acid, you alter the character of the salt. Thus soda may be united to oil of vitriol and form Glauber's salt, or to aquafortis and form South American saltpetre, or to muriatic acid and form common table salt. The soda is called the base or basis of this salt; that is always soda—you do not change its character by changing the acid. To give another example:—lime may be united to carbonic acid and form chalk, or marble, or limestone, or it may be united to oil of vitriol and form plaster of Paris, or to phosphoric acid and form bone-dust. Now, in each case, the base of the salt, that is, the lime, remains unchanged; but, changing the acid, we change the nature of the salt, and of course its effects will be different. Now it is plain, that where the base of the salt remains the same, that will always act the same, but different effects will be produced by different acids. Each base acts always one way, but each has an action similar to every other. Each acid acts also one way, but each has an action distinct from every other: impress this on your mind. Reflect upon it a moment, and you will perceive that salts produce different effects according to the nature of their acid. Now this may be illustrated thus: you take every day, probably, with your every meal, common salt, that is, soda, a base, united to muriatic acid. Your digestion and health are all the better for it. You give your cattle a little salt: it does them good. Suppose now you change the acid of that salt, leaving soda, its base, in the same quantity you daily take. Instead of the muriatic, suppose you substitute the nitric acid, or, what is the same thing, suppose you use saltpetre, from Peru, instead of common salt. You need not be told that you would poison yourself and your cattle by so doing. You can drink, I dare say you have, cream of tartar punch. You feel the better for it. It is refreshing, cooling, opening. Now, cream of tartar is a salt of potash: it is potash and tartaric acid. You have a fever: your doctor gives you a sweat with Silvius's salt, that is, acetate of ammonia, a salt composed of that and vinegar; or you take perhaps an effervescing draught, formed of lemon-juice and pearl-ashes. All does you good: but suppose now you change these cooling, vegetable acids for a mineral acid, say oil of vitriol. You may not take potash united with a dose of oil of vitriol equivalent to the tartaric acid in the cream of tartar, without serious injury.

So is it, reader, in farming: the acids of some salts are not only harmless, but beneficial to plants; others are actual poisons. In the first case salts help to nourish plants, as common salt helps to nourish yourself; in other cases they poison plants, just as they would impair your constitution, perhaps kill you. But it is to be remembered, as in our own case, even those that poison, in a small dose become medicines, so, in plants, a small dose is not only good, but truly essential. Now, if we divide the acids into two classes, the nourishers and the poisoners, such will also be the nature of the salts. When we therefore attempt such a general division of the salts, it may be said that all the acids derived from the vegetable kingdom are harmless; so are the acids called mineral, yet whose components are in part like those of the vegetable acids; for instance, aquafortis or nitric acid. But the true mineral acids are poisonous, such are oil of vitriol and spirits of salt. One thing is here to be borne in mind: It must never be out of sight, in trying to understand how salts make plants grow. You cast your salt upon the ground, it lies there, no action occurs. It rains. Your salt is dissolved and disappears; it seems to do no good. Cast your salt now among sprouting seeds, and growing roots; here is life; well, now, life is just as much a power or force as electricity is. It exerts its force, no matter how, that is quite another consideration. I say, life exerts its force here to separate the acid and the base of a salt, just like a chemical force. We can and do separate the components of salts by other substances, nay, we do it by electricity alone.

Now this is all which it is necessary for you to know, and to understand about this action of plants upon salts: it does disunite the components of the salts. What is the consequence? The alkali, earth, and metal act as such, the same as if no acid was present. The acid also acts by itself; if it is a nourisher, it helps the plant; if it is a poisoner, it hurts it. It produces either a healthy, green crop, the effect of alkali, or a stunted yellow, sickly plant, the effect of acids. Now, neutralize this acid—kill it—and you see your crops start into luxuriance, and you reap where you have strewed. So much for illustration.

Let us now apply this view of the action of salts to those contained in cattle dung. In the first place, we have salts of potash, of soda, of lime; these are the most abundant and active. Then we have salts of iron, manganese, of clay and magnesia. These last, existing in small proportion, may be thrown out of the account, bearing in mind, however, that, though we set these aside, a plant does not; they enter equally with the others into its composition. Let us begin with the salts of potash It is found combined in cattle dung, first, with a vegetable acid, the acid of mould. It is a nourisher of plants. Secondly, with sulphuric acid or the acid of sulphur, called oil of vitriol. This is one of the poisoners, existing only in small proportion in cow dung: it ministers to the wants of a healthy plant. The same is true of the common salt or the muriate of soda of dung. If it existed in larger quantities it would poison the plants to which it might be applied. The next salts are those of lime, phosphate and sulphate of lime, or lime united to sulphuric and phosphoric acid, forming plaster and bone-dust. The acids here, if abundant, would have a decided bad influence—they are poisoners: but the carbonic acid in the carbonate of lime, is a nourisher. Now, from the small quantity in which these all exist in cattle dung, they act only beneficially. But if you apply a great excess, even of cattle dung, you may be sure of an unfavorable result. It will be produced by the acids of those salts which we have called poisonous. To continue our remarks on the acids of salts of dung, it is to be observed that they act also upon the soil.

They decompose that. That is, they extract from the soil alkalies or other substances, like those in the original salt. Now, though applied, as they must be, in very small doses in cattle dung, yet, because of their decomposing action on soil, they continually renew themselves, they last till all their acid is taken up to supply the wants of growing plants.

Let us now, reader, if you understand how the acids of the salts of dung act, turn to the bases or the alkalies and metals and earths of these salts. What is their action? What purpose do they serve in dung applied as manure? First, they enter into and form a part of the living plant: they form a part of its necessary food as much as do the constituents of mould. Secondly, when these alkalies and metallic bases are let loose, by the disuniting power of a growing plant, then they act as alkalies upon mould. They hasten decay, render mould more soluble, fit it to become food for plants.

This account of the action of mould and salts in cattle dung, may appear to you, reader, long and hard to be understood. I do request you not to pass it over on that account. A patient reading—perhaps some may require two or more readings—will put you in possession of all you need to know, to understand the why and the wherefore of the action of mould and salts of whatever manure may be used. What has been said of the action of mould and salts in cattle dung, is equally applicable to all manures. If, then, you bend your bones to this subject, and master it, your labor of understanding the action of other manures, will be reduced to the mere statement of the several substances which they may contain. We therefore proceed to point out other manures, composed of the droppings of animals.

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Section Sixth.

Of Night Soil, Hog Manure, Horse and Sheep Dung.

These have not all been analysed with the same degree of care, and as often, as has cattle dung. Some, as for instance, night soil, have been examined thoroughly but once. Now, it is not quite fair to base our reasoning upon these single analyses, and say that this or that manure contains this or that salt in greater or less quantity than another.

The quantity and kind of salts are materially affected by several circumstances, which will be considered in the next section. An analysis made when the animal is fed and worked one way, will vary from the result which would be obtained when the circumstances are varied. It is, therefore, quite useless, in the general consideration of the composition of manures, to enter upon the details of each. General results, general expressions of facts, are sufficient for understanding the nature of animal droppings. It is well ascertained, however, that all these droppings, of various animals, contain essentially the same salts as does cattle dung, They all contain portions of each of the substances which form plants It will be enough for the purpose of this Essay, to present to your eye, reader, a table, showing the proportions of water, mould, and salts, which the dung of yourself and your stock contain

	Water.	Mould.	Salts.
Night soil & hog manure,	75 30	23.50	1.20
Horse dung,	71.20	27 00	.96
Sheep dung,	67.90	22.50	3.06

(To be continued.)

From the American Farmer.

ROOTS vs HAY.

We take the following from a report made to the Massachusetts Agricultural Society, by the Messrs. Colts, of Pittsfield, Berkshire Co., and we do it to show the immense advantage made in substituting roots for hay in feeding cattle, as well as in the quantity of ground necessary to produce a given quantity of food.

The writer says—"My stock now consists of 1000 sheep, 8 young oxen, 6cows, a pair of horses, and a single horse. I have raised this season for the use of my stock 5544 bushels of vegetables, and all to be grated and fed out with cut straw, the cattle constantly, the sheep one feed a day, which seems to be a necessary food in our long cold winters: it keeps them in health and also in flesh. As to the respective value of the vegetable food, the following statement will per-

haps be t exhibit it. I have commenced feeding and shall continue to feed—

14 head of horned cattle with 20 lbs. of cut straw each per day, 4 cents for each 20 lbs. 56 cents. Also to each, 8 lbs. of roots grated, mixed with straw, 3 cents, 42 cents. And now allow 150 days for the season of feeding at 98 cents, is $147. The same stock would require 20 lbs. of hay each per day for 150 days; they would consume 42,000 lbs., equal to 21 tons; at the moderate price of $10 per ton, $210. Balance in favor of root feed $93, and I am sure the stock will appear far better at the opening of the spring.

You will perceive that the respective value of vegetables for food is six cents a bushel, while hay is at ten and straw at four. It may be said there is some cost in preparing f od, but this is more than compensated if properly done, by the extra quantities of manure made."

Thus it appears that 20 lbs. of straw, and 8 lbs. of roots, mixed, afford more nutriment, and of course are more valuable than 20 lbs. of good hay, while the actual cost is much less.

14 tons roots is a moderate crop per acre, while the average of hay will fall considerably below two tons per acre. The advantage in favor of the turnep is thus perfectly apparent, and the farmer who persists in mowing his twenty or forty acres, which would furnish roots sufficient, if mixed with the straw which might be grown on the remainder, to keep his animals far better than the hay, and leave the grain crop nearly a clear profit, is clearly acting against his true interests.

Again we say to our farmers, you did well last year by so extensively entering upon the culture of roots; you will do better this year by greatly extending their cultivation."

Communicated for the Southern Agriculturist.

ON THE COTTON GIN, AND THE INTRODUCTION OF COTTON.

Answers to queries of Hon. W. B. Seabrook of Edisto, S. C., by Thos. Spalding, Esq. of Sapelo, Geo.

Sapelo Island, Jan. 20th, 1844.

Dear Sir: Your letter of the 10th inst. was received two days ago, and I was gratified at the communication, as I have long wished to be personally acquainted with some of the gentlemen of your immediate district; your pursuits, your habits, and your opinions, appearing to be in accordance with my own; and nothing but the continued pressure of a painful disease, of now ten years standing, has prevented me carrying out my design, by visiting you.

I will now proceed to answer your queries, in the order in which they are placed; only begging you to remember, if you notice any indistinctness in my answers, that I have only a few days since recovered from a very severe illness which prostrated both body and mind.

1st. Eve's Gin was invented by Joseph Eve, who lately died at Augusta, somewhere about the year 1790, in the Bahama Islands, where Mr. Eve then resided.

Mr. Eve was the son of a Loyalist from Pennsylvania, who had been the friend of Franklin; and Jos. Eve was himself qualified to have been the associate and companion of Franklin, or any other; the most enlightened man I have ever known. His Gin consists of two pair of rollers, more than three feet long, placed the one set over the other, upon a solid frame that stands upon the floor, inclined at an angle of about thirty degrees—so that the feeder may the more easily throw the cotton in the seed by the handful upon a wire grating that projects two inches in advance of the rollers, just below them; between these projecting wires, the feeding-boards, with strong iron, or in preference, brass teeth pass, lifting the cotton from the wire grating, and offering it to the revolving rollers. The feeders should make one revolution to every four revolutions of the rollers. The rollers are carried forward by wheels supported over the Gin, and upon the axle, or shaft of these rollers; at the centre, there is a crank, similar to a sawmill crank, the diameter of whose revolvement, is as one to four of the diameter of the wheels, carrying by bands the rollers.

It is the crimping produced by the teeth and the wire grating, which has served as a cause for carping by the cotton-buyers, and which has gradually led to the disuse of these Gins, the only Gin efficient for the cleaning of long cotton, which has ever been used in this or any other country. With Mr. Eve's Gin, as originally sent to this country from the Bahamas, the rollers were ⅞ of an inch in diameter, made of stopper wood, a very hard and tough wood, and they were graduated to make 480 to 500 revolutions per minute, depending of course, upon the gait of the horses or mules, within these limits. Soon after Mr. Eve first sent his gins to Georgia, some of his own workmen followed them, and began to make them on their own account. To show as much change as possible in the Gins, beside the other alterations, they increased the size of the rollers. they increased the sizes of the roller to ⅞ of an inch, and increased its velocity to six hundred times in the minute. These two changes, while it greatly increased the quantity ginned, very much injured the appearance of the ginned cotton. Mr. Eve had expected and guaranteed to the purchasers of his gins when well attended, in fine weather, from 250 to 300 lbs. of cotton in the day. I have known these altered gins, do sometimes six hundred, but the injury was greater than the increased quantity warranted, add to which the quicker movement of the feeder made the more impression upon the cotton passing from the feeder to the roller.

2d. The first bale of Sea-Island cotton that was ever produced in Georgia, was grown by Alexander Bisset, Esq. of St. Simons's Island, and I think in the year 1778. In the winter of 1785 and '86, I know of three parcels of cotton seed being sent from the Bahamas, by gentlemen of rank there, to their friends in Georgia; Col. Kelsall sent to my father a small box of cotton seed; the surveyor-general of the Bahamas, Col. Tatnall, sent to his son, afterwards Governor Tatnall of Georgia, a parcel of cotton seed; Alexander Bissett's father, who was commissary-general to the Southern British Army, sent a box of cotton seed to his son, in the year 1786; this cotton gave no fruit, but the winter being moderate and the land new and warm, both my father and Mr. Bissett had seed from the ratoon, and the plant became acclimatized. In 1788, Mr Bissett and my father extended the growth, but upon my memory it rests, that Mr. Bissett was the first that found the means of separating the seed from the cotton, by the simple process of a bench upon which rose a frame supporting two short rollers, revolving in opposite directions, and each turned by a black boy or girl, and giving as the result of the day's work five lbs. of clean cotton. What disposition Mr Bissett made of his cotton I know not, but as he was a sensible man, and his father had returned to England, I think it more than probable that he shipped it there.

3d. When cotton was first grown it was planted upon the flat land at five——apart, it was quite too thin, and although the plant grew generally well, the product rarely reached one hundred lbs. per acre, and at four acres to the hand, gave about four hundred to the labor.

My father died in the year 1794, leaving me some property at St. Simons's Island; a gentleman who had been his friend, came for his health, to spend the winter of that year in Georgia, he gave his advice freely to all he saw, that were growing cotton; I was young, he had been the friend of my father, I listened to his advice, left 8 or 10 plants where one had grown; and made off a small field of sixty acres, 350 lbs. to the acre. The revolution was accomplished and the crop greatly increased.

4th. No manure was used for many years in the culture of cotton, persons depending upon the in-field, and the out, or the alternate cultivation of the field, which was soon found necessary. The first suggestion of manure upon a large scale to cotton, came from Col. Shubrick, of S. Carolina, who recommended in some essays in the papers, the application of the drifted reck, that is thrown up by the tides. After the hurricane of 1804, I bestowed a great deal of labor in spreading this reck between my cotton rows over several hundred acres; whether the sea had left too much salt, or whether there was too much in the material itself, I know not, but I neither then, nor afterwards, experienced much benefit from the application.

5th. The plow was but little used for any purpose at St. Simon's; it takes many years before the Palmetto, and the collateral roots of the Live Oak, make hammock land free to the plow. Major Butler did use the plow with mules for both purposes.

6th. The cotton was generally worked four times; we soon found that our working should cease, as soon as the rains became heavy, say at the middle or end of July.

7th. The ridges were renewed every year, or every other year, whenever the field was planted in cotton; they were originally low, and rather small; they were increased in height and breath, according to the different opinions of men.

From the year 1798 to 1802, the St. Simon's cultivation had assumed a regular form, and was in my opinion, good; twenty-one rows to the 105 feet, the ridge occupying the entire space, large but full and flat upon the top. The cotton seed drilled, and the plants thinned, from six to ten inches apart, dependant upon the expected growth of the plant. Major Butler, and Messrs. Couper & Hamilton who cultivated extensively near me, were in the habit of topping the cotton in August, to retain, as they supposed its fruit. I was in the habit of taking off the top of the plant, when the cotton was from 15 to 18 inches high, to make it branch and give a better head.

Twenty years ago, upon purchasing some river land, opposite to Savannah, I adopted permanent ridges, planting a row of corn, and a row of cotton alternately; these ridges had stood nine years, when my son sold the plantation, giving, as I think, the best cotton, and the best corn crops in Chatham county. And this course, I consider the nearest approach to Flemish husbandry, I have known in Georgia; because, although the corn and the cotton changed alternately from ridge to ride, the entire field was kept in full culture, preventing the growth of grass and noxious weeds.

8th. Accounts were kept in pounds, shillings, and pence, in those times, cotton brought at first 14*d.* sterling, but rose gradually in about four or five years, to two shillings, at which it stood, until the unfortunate dabbling with commerce commenced in the year 1806. The first non-importation act, passed in that year, and none more active in its adoption, than our southern men. There were but five men, south of the Potomac, who voted against it, Randolph, J. M. Garnett, Thomson of Virginia, Standard of North Carolina, and myself from Georgia.—From that day to this, the agriculture and commerce of the country has been at the mercy of speculators.

9th. Care was taken for many years, as much as possible to separate the seed, carrying any fur from the black seed, intended for planting.

10th. The St. Simon's cotton stood first, and Maj. Butler's and my own first among them. From the character of the tradesmen attending his gins, or the greater strictness of his manager, his cotton soon took a preference, which it preserved for some years. The staple of the St. Simon's cotton, was thought better than any other; the putting up of Maj. Butler's cotton placed it at the hands of others.

11th. The bags were packed as now with the pestle. I never knew the screw used for long staple cotton but at Mr. Hamilton's plantation, and it was soon given up.

12th. The green seed cotton, was for some years packed with the pestle, in fact I remember to have heard objections made to the screw, and square bales, at their first introduction.

13th. Negroes were worked in task-work, in Carolina and Georgia upon the sea-coast, from my earliest recollection. The task in listing,

the fields being previously cleared up, and the remains of the former year burned off, was half an acre; the laborer was required to ridge afterwards, when carefully done, ⅝ths of an acre; and in hoeing, half an acre was the task, depending, however, much upon the season, and the condition of the field.

14th. The bags generally were expected to weigh 300 lbs. Major Butler's were 4¼ yards and contained 260 lbs.

15th. The rust did not appear for some years in our fields, and when it did, I attributed it to listing in green vegetable matter in the latter summer, for the next year's crop; or coarse vegetable matter in the winter, instead of burning off, which left a light top dressing of ashes. The caterpillars made their appearance, I think, for the first time, in 1793, and destroyed the crop. I remember Maj. Butler made but 18 bales of cotton from 400 acres. There was also a red bug, a winged insect, with a long proboscis, with which it pierced the green pods, extracting the juices of the seed and leaving the pod blighted and hard, and the cotton stained of a deep yellow or red color. In new lands this insect was very destructive, as it had been in the Bahamas, and as it found protection against the cold in the bark and roots of the trees, it was apt to remain for years injuring the quality and reducing the quantity of the cotton.

16th. The cat erpillar was first seen to do injury as I think in 1793, the injury was unusual, the destruction complete, so as scarcely to leave seed. The destructive caterpillar, is not the same that feeds upon the Indigo; the green caterpillar I have frequently known to riddle the leaves, to a great extent, without great ultimate injury, but it is the black and yellow striped caterpillar, that in a few days, say from four to five, will spread over hundreds of acres, not leaving a green leaf, and finally, nothing but the full grown pods, which they sometimes break and injure.

17th. The black seed cotton had been shipped for several years, before they began to grow in the interior the green seed for sale.

I remain, dear sir, respectfully,
Your ob't. serv't.
THOMAS SPALDING.

From the Delaware Journal.

ROOT CULTURE.

A paper on the culture of Roots, read before the "Practical Farmers' Club," by one of its members, at their March meeting:—

No crop is more important to the farmer than the Root Crop, and yet how very seldom in this section of country we see it sufficiently appreciated. At the head of this valuable family stands the Ruta Baga or Swedish Turnep, being first in my opinion, for the following reasons: the seed is put in the most readily, less liable to injury from the insect when young, requiring less expense in the culture, not injured by the early frosts, keeps better through the winter, and last, though all important, yields the most certain crop.

I have been cultivating them for the last 13 years, from one to five acres annually, and like all other crops with different success, but never until this last year an entire failure, (when, from some cause, almost all our root crops were lost;) nor do I think I have ever raised much over 600 bushels per acre, taking the whole crop together; no doubt, by selecting a few square yards of the best, (as is too often done in reports of crops,) and making the calculation at that rate per acre, I might have doubled that amount. Perhaps it may have been from want of proper culture, manure, or some other cause, that I have not obtained a larger yield, for we frequently see statements of crops reaching from 1000 to 1500 bushels per acre. At page 61, volume 1st of the "Farmer's Cabinet," you will find the statement of a crop of one acre grown in this county, from which two tons of hay were cut before planting; then $58 worth of manure spread on it, which, with the preparation and labor with the crop, &c., brought the expenses of it to $83 55—still the yield handsomely remunerated it, being 850 bushels, which at 16 cents per bushel, (the price obtained for part of them, the balance being consumed on the farm,) makes $136: two tons of hay sold for $34, and 4 tons of tops estimated at $8, makes a total of $178—from which, deduct the expenses above, and we have a clear profit of $94 45 from one acre; besides which, the land is left in fine condition for any other crop to follow.—Also at page 171, volume II, same work, is an article from Mr John Sanford, of New York, who says "his business is to work not to write," but he gives us his experience with the Ruta Baga in a very satisfactory manner; he planted three acres in drills on the 26th and 27th of June, hoed but twice, and the yield was 3000 bushels, being 1000 bushels per acre,—he adds that "he thinks they draw more nourishment from the atmosphere and less from the ground than any other vegetable, leave the ground in finer condition and cannot be too highly valued." He also adds, "let all raise according to his wants and means of feeding, depending on his own market, and omit raising a portion of other produce which costs him five times as much both in labor and land."

The Rev. H. Colman obtained a premium, in 1830, for his crop of 903 bushels per acre: he "thinks the labor not as much by one-third as required for the Potato crop," and that "three years' experience has increased their value very much as food for either fattening or store cattle, in his estimation."

Mr. E. Tilden of New Lebanon, who has a flock of 1000 of the finest Saxony sheep, says, "I think Ruta Bagas are decidedly preferable to any other roots, and I raised about 3000 bushels last season."

So we might go on to multiply, without number, accounts of the great value of this excellent vegetable; but let every one give it a fair trial for themselves, and I think I can safely predict that, having once made use of them, they will never omit having a good supply on hand. My method of raising the crop has been to have the ground in as mellow a state as possible, by a free use of the plow and harrow, then to throw it into ridges about 30 inches apart; spread the manure in the furrows, then split the ridges, throwing it back again into the furrow and covering the manure. I prefer this plan of manuring to putting it on broadcast; for, with the latter mode, (without it should be very short,) it interferes more or less with the drill—for, as a matter of course, in ridging the ground after plowing in the manure, you cannot avoid throwing it up again, which brings the manure on the top of the ridge. A less quantity will also answer, as the roots strike immediately into and have the whole benefit of it. I have a very light roller for one horse, to which I attached the drill, which finishes the operation, as the roller going before the drill levels it sufficiently for the seed. About the last of June, I consider the proper time for putting them in, and I prefer doing it at two different times, about two weeks apart, as you will not then be so much hurried in working them, giving you time to get through with the first planting before the next is ready: it is also much better to put the seed in the same day you ridge the ground—with a drill it takes about three-fourths of a pound of seed per acre. As soon as the plants are up, go through them with the cultivator, and when they are large enough to be safe from the fly, go over them with the hand-hoe, thinning them from 10 to 12 inches distance, and hoeing over the strip not worked by the harrow; keep the cultivator frequently at work, and give them a second hand-hoeing, so as not to allow a weed to start; and if the season is not very unfavorable, I will almost be willing to guarantee you at least 600 bushels per acre. Postpone gathering them as long as the season will permit, the early frost does not injure them. My plan has been for each hand to pull two rows at a time, cutting off the smaller roots and top, and two of them throwing the roots together in the intermediate furrow, making 4 rows together, which allows room for a cart to pass between in gathering them; they may either be kept in a cellar or buried in the field, as is often done with the potatoes,—do not keep too warm, nor, on the contrary, allow them to be frozen, and they will be firm and good until May.

In feeding, I cut them with a knife made by two blades crossing each other at right angles, fixed on a long handle, which makes very expeditious work, and is superior to any of the many machines I have ever seen invented for that purpose. Many object to feeding them to milch cows on account of imparting to the butter an unpleasant taste; if given to them but once a day there is no danger of that being the case, at least I have never found it so.

Beside the saving to your corn crib, you will also find your stock looking much better from the use of them, as it keeps them in a much more healthy state than when confined the whole winter on dry food, they also eat their hay and other provender much better from having a change.

The Sugar Beet, Mangel Wurtzel, Carrots, Potatoes, and many others of this valuable family, all have their advocates and all are excellent; only be sure to raise some of them, which ever you prefer. I have given you my experience with my favorite, and shall be gratified if I can induce some of you who have never yet tried it, to give them a trial.

N. B. If you do not wish to go to the expense of purchasing a drill, you can put them in very expeditiously, by levelling the ridge with a rake, making a small furrow with a stick, and sprinkling the seed in it from a bottle, having a quill through the cork, which can be regulated by the finger being kept on it, and then covered with the back of the rake.

From the American Farmer.

ALTERNATION OF CROPS.

This is unquestionably one of the best and most economical means of preserving fertility, and of increasing the profits of the farm. All crops exhaust the soil more or less, of the general elements of fertility, though all do not exhaust it alike of certain specific properties. It is believed that every plant requires a specific food, which other families do not stand in need of, and which they do not take up. This is evidenced by the fact, that wheat cannot be profitably grown on ordinary land, in two successive years, upon the same field, without a great falling off in the product. And it is now laid down as an axiom in good husbandry, that two crops of any small grain should never be taken from the same field in successive years, because they draw too largely upon the same specific food. But after an interval of four or five years, in which grass and roots intervene, the specific food of the wheat crop has so accumulated in the soil that this grain may then again profitably be grown upon it. So with all other crops, not even excepting the grasses. The law of nature's change in the products of a soil is so palpable, that in Flanders and Holland, where flax is one of the profitable staples, they do not think of cultivating this crop upon the same ground oftener than once in ten or twelve years. Our farmers, some of them, seem to appreciate these truths in reference to tillage crops, without duly reflecting that they apply as well to grain. Meadows, too, deteriorate; in a few years the finer grasses run out, because the soil becomes exhausted of the particular food which affords them nourishment, coarse or innutricious plants take their place and the herbage becomes inferior in quality.

Upon an average, old established meadows would yield double their present crops, if judiciously alternated with grain and root crops. The terms "suitably divided into meadow, plow and pasture lands," which are generally employed to recommend farms for sale, are an indication of bad husbandry; and very often betray the secret which compels the owner to sell. Excepting in very stony districts, every acre of land which would produce good grasses, may, by being rendered dry and rich, be made to produce good grain and roots. In this convertible

system of husbandry, permanent meadow or plow lands are almost unknown—every field produces in turn, crops of grain, grass and roots.

There are three classes of crops which alternate beneficially with each other, viz: 1st, grain, or corn, or dry crops, which mature their seed and most exhaust the fertility of the soil; 2d, grass crops; and 3d, root or green crops, embracing turneps, potatoes, beets, clover, &c. In old meadows and pastures, not only the better grasses disappear, and coarse herbage and mosses come in, but the soil becomes too compact and hard to admit the free extension of the roots, and the genial influence of the sun, dew and atmosphere, which are primary agents in the process of vegetable nutrition Tillage corrects these evils. It cleans the soil of weeds, and converts them into sources of fertility; it breaks and pulverizes the soil, and fits it for the return of the grass crop at the close of the rotation; while the vegetable matters of the sward contribute to augment the grain or root crop which is to follow. All green crops are more or less fertilizing when buried in the soil; but clover is preferred, as well on account of its enriching properties to the soil, as that it also affords hay and pasture. The practice of sowing clover seed with grain crops is adopted by some farmers every year. Judge Buel followed this plan, but he plowed his field on the following year. The food which this clover affords to the coming crop, richly compensates for the cost of the seed and sowing, to say nothing of the pasture it gives in autumn. Hence, tillage is admirably calculated to fit and prepare the ground for grass, and in return directly or indirectly furnishes an abundance of food for grain or roots. The fertility of a soil depends, essentially, upon its power to absorb water by cohesive attraction, and this power in a great measure upon the state of diversion of its parts—the more divided they are, the greater is their absorbent power. The crop upon a hard compact soil will suffer from drought; but if this soil is finely pulverized and broken, it will suffer much less. The first may be compared to the rock, which receives moisture upon its surface only, the latter to the sponge, which receives and transmits moisture to the whole mass, and which retains it for a long time.

From the American Farmer.

WHAT IS THE PROPER FOOD OF WHEAT?

This is a question much easier asked than answered; for though it has been mooted at intervals from the earliest introduction of the wheat culture, it never has been satisfactorily answered, and we question very much whether it ever will be, so as to render the solution of it generally available; but still we may be able to form something like an approximate opinion through the aid of the laws of analysis. By resorting to these, we find what are the constituent elements of the wheat berry, and hence the inference is, that if we can apply substances to the soil containing these elements, of a soluble character, that we will approach as near as is desirable to furnishing the appropriate food for the wheat plant. The next question to be considered relates to the quantities of the several kinds to be applied to the acre? How far climate may operate to facilite or retard their solution? It is plain that before the rootlets can take up food of any kind, it must be reduced to a liquid or gaseous form, and it is equally plain that this condition of the pabulum from which they derive their support, can only be brought about through the agency of heat, air and moisture, as while all vegetable bodies must undergo decomposition, so must those of a mineral nature be reduced by the dissolving action of water. As connected then, even with the proper quantities, if the proper kinds of manures could be ascertained, the seasons and the climate exert most potent influences, either for good or for evil, in the growth of the wheat, or any other kind of vegetable production; hence what might prove salutary one year, would be otherwise another. But let us consider now of what wheat is composed. By the analysis of Sprengle, a thousand pounds, or say, 16 2-3 bushels of wheat, leave

Of Potash,	225 lbs.
Soda,	240
Lime,	096
Magnesia,	090
Alumina with a trace of iron,	026
Silica,	400
Sulphuric acid,	040
Chlorine,	010
	1127

Thus then, if this analysis be accurate, and Sprengle's reputation is a guaranty that it is, the inference is a fair one, that, as the above constituent elements are to be found in the berry of the wheat plant, the soil should be provided with each and all of the substances enumerated, either in greater or lesser proportions, in order that the preparation of the food of the plant might be going on. In every soil alumina (clay) and silica (sand) are always present, and from the greater quantity of the latter, found by analysis, as a constituent element, we should infer that, notwithstanding wheat is said most to delight in clay soils, still that sand is indispensable to the fructification of the grain. We know that unless there be a sufficiency of potash in the soil to dissolve the silica, and yield it to the plant, that, as a natural consequence, the stem will lack that ingredient essential to enable it to stand erect, and from the evidence afforded by the analysis, we should conclude that ashes, potash and lime, are indispensable to the successful culture of wheat, and that salt would be found to be a valuable auxiliary; nor should we apprehend so much dread as is indulged in by some, if the lime used were of the magnesian kind.

It may be said, that because we find these various substances in wheat, that that is not conclusive proof it derives it exclusively from the soil. We admit this supposition most freely, inasmuch as we are satisfied, that a very sensible portion of the food of plants is derived from the atmosphere, and that this portion is as well appropriated by the leaves as by the roots; by the latter process the most, when, by the organic remains, or mineral manures used, the powers of absorption, retention and assimilation, the soil have been accelerated to activity. From the presence of sulphuric acid, we should take it for granted that plaster is almost as essential to wheat as it is to clover. We are aware that this opinion will not be considered as orthodox by a very large description of farmers, who will tell you that plaster increases the straw but decreases the grain. Now we are not sure that this opinion of theirs is well founded. If, after the use of plaster, such result may have been produced, may it not have sprung from other causes than the use of plaster? May not the weather, an excess of rain, or nutritive manures have produced the result, and not the plaster? If the *theory* of the action of plaster, which strikes us as most rational, be the true one, its most essential office is to *husband* and dole out gaseous food, according to the wants of the plants, rather than to stimulate them by improvident and too luxurious feeding: If this were not the case, we should think that the minute quantity required for an acre, would not answer the valuable and wonder-exciting purpose that it does. If its office, of itself, were merely stimulative, its effects would be less manifest and less lasting, nor would those effects be visible beyond a single season; hence we infer, that, besides its *direct* agency, it exerts an *indirect* one, as a *caterer*, if we may so express ourself, still more important. Again, those who deprecate the use of plaster directly to the wheat crop, do not hesitate to use it on clover, and turning that in with the after-math, to grow wheat on it. Why, then, if plaster exerts so unfavorable an influence when applied as above first stated, is it that when sown on the clover the wheat escapes the assigned injury? This is a question as difficult of solution, as is the one with which we begun this article: for, as the plaster requires many hundred times its own body of rain to dissolve it, it must necessarily continue its action through several seasons and successive crops.

We have thrown out these remarks merely as suggestions, in the hope that the question of "What is the proper food of wheat?" may draw out some able correspondent, whose knowledge, observation and experience, may enable him to throw light upon the subject.

ESTIMATE OF THE CROPS OF 1843.—A tabular estimate of the crops for 1843, has been prepared with much care under the Commissioner of Patents, at Washington, and from numerous sources of information, makes the wheat crop 100,310,856 bushels; barley, 3,220,856 do.; oats, 145,329,969 do; rye, 24,280,271 do.; buckwheat, 7,959,410 do.; Indian corn, 494,618,206; potatoes, 105,765,133 do.; hay, 15,419,807 tons; flax and hemp, 161,007 lbs.; tobacco, 185,731,554 lbs.; cotton, 747,666,090 lbs; rice, 80,879,145 lbs; silk, 315,965 lbs; sugar, 66,400,310 lbs; wine, 139,240 gallons. Pennsylvania has contributed to this amount 12,215,230 bushels of wheat, ten per cent in advance of the year previous; 150,398 bushels of barley; 19,826,938 of oats; 9,429,637 of rye; 2,408,508, of buckwheat; 15,857,431 Indian corn; 9,161,409 of potatoes; 1,899,128 of hay; 3,527 of flax and hemp; 441,944 tobacco; 26,482 silk; 878,730 sugar; 18,983 of wine. The only States which exceed Pennsylvania in wheat are Ohio and New York.

The estimate of Ohio is 18,786,705 bushels; New York, 12,479,499 bushels. The States which exceed Pennsylvania in the growth of potatoes are Maine and New York. The growth of this article in the latter named state is enormous. It is set down at 26,555,612 bushels; Maine, 10,253,521 bushels. The State which produces the greatest amount of barley is New York, nearly ten times greater than Pennsylvania. That which produced the greatest amount of oats is New York, Pennsylvania next, and Ohio next. Pennsylvania has produced three times more rye than any other state; also, the greatest amount of buckwheat. Tennessee produced the greatest amount of Indian corn, the estimate is 67,838,478 bushels. Missouri produced the greatest amount of flax and hemp, 30,300 lbs; Kentucky, the largest yield of tobacco, 52,322,543 lbs; Georgia the largest amount of cotton, 185,758,138 lbs; Connecticut the largest amount of silk, 140,971; Louisiana of sugar, 37,173,590 lbs; and New York next, 6,934,616 lbs. A comparison of the agricultural products of our own with other countries, from well authenticated tables made in 1828 gives the following result:

The number of bushels raised to each soul, was, of grain, wheat, barley, oats and rye in Great Britain, 12 bushels; Denmark, 20; Prussia 12; Austria 14; France 7; Spain 5; United States 18½. There has been a great advance since then both in Europe and this country.—France, in 1841, produced of the grains, 547,550,443 bushels, and the United States, 533,988,970 bushels. The population of France was then more than thirty-one millions, and the U. States over seventeen millions. Thus the proportion of grain in the United States to a person, compared with France was nearly two to one. Similar comparisons with other countries would be greatly in favor of our own, showing that our surplus is the greatest.—*Philad. Ledger.*

From the Albany Cultivator.

SOWING CORN FOR FODDER.

We would suggest the sowing of corn broadcast on rich land for winter fodder. Mr. Sotham, of "Hereford Hall," sowed six acres last year, which he thinks yielded nearly six tons of dry fodder to the acre. He has fed both cattle and sheep with it, (cut with a machine,) the past winter, and is so well pleased with it, that he is determined not to be without it in future. Others, who have tried it, speak equally in its favor. The quantity of seed recommended to be sown per acre, is from two to three bushels. Some experiments made by Mr. Welles, of Boston, seem to show that it is best to cut it soon after the shindle makes its appearance.

For the Southern Cultivator.

REPORT OF THE COMMITTEE ON MANURES. OF THE BOWLING GREEN AGRICULTURAL SOCIETY, IN OGLETHORPE CO., GA.

Your committee, to whom was referred the subject of investigating and reporting on the best mode of raising and applying manures, acknowledge that their experience is so limited, that they are entirely incapable of doing justice to that important branch of Agriculture. Notwithstanding, we beg leave to report—

1st. That, to succeed in raising manure, we should find out what are the different compositions that will ferment and decompose in the shortest time, and in the best manner; and our limited experience is this: to haul upon our farm-yards corn and cotton stalks, leaves from the woods, weeds, rotton wood, &c., and spread them upon the yard—and then cover them with muck or dirt from a pond; after they have been sufficiently trod, dunged and urinated upon, which time must be regulated by the season of the year, it should be thrown into a pit prepared for the purpose, or in pens, taking care, after your heap is completed, to cover it well with muck or pond dirt, to prevent evaporation Your stables should be filled up with the same kind of litter except the muck, and cleaned out once a week; this system would make it more comfortable for your horses, and prevent the loss of a great quantity of urine. The quantity of litter to be placed upon the barn-yards must differ in the different seasons of the year. In the spring, they should be six inches deep, the muck or pond dirt one inch deep. In the summer, the coat or layer of litter and muck should not be so thick, and trod not exceeding four weeks; then raked up and thrown into the pit or pen.

The reason for cleaning up in so short a time is obvious; it prevents the long hot summer day's sun from burning it up, or killing the droppings or dung of the cattle, and the evaporation of the urine, which we believe to be no little item in the preparation of manures. As the season moderates, the layers of litter and muck should be deeper and longer trod. We are of opinion that the above preparation may be continued for Cotton, until the last of February, successfully.

Your committee beg leave, now, to report upon the application of manures.—In the first place, we recommend that the manure be placed in the hill or drill, as deep, if possible, as the clay or subsoil, immediately under the corn or cotton, or any other article, and covered with dirt previous to planting. If for corn, a very small quantity of dirt should be placed upon the manure: if for cotton, it should be bedded upon until the manure is covered from four to six inches deep. The reason that we recommend placing manure in the hill or drill, is owing to the small quantity that we have. If we had a sufficient quantity, by all means the system of throwing it broadcast is the true Agricultural system. All seeds should be planted immediately subsequent to the application of the manures.

In treating upon the subject of manures, cotton seed comes into the account, as it is known to be a great fertilizer. There seems, however, to be as many conflicting opinions and modes in the application of cotton seed as manure, as any other article of manure, if not more. Some contend, (and all say from experience,) that the proper mode is to put the seed in the bottom of the furrow, after the ground is laid off, and then throw a small quantity of dirt upon the seed; then drop the corn and cover in the common way, say with a plow or hoe. Others contend that the seed should be dropped upon the hill immediately after the corn is planted, so we say not until the corn is up, and then they should be placed round the corn and covered with the hoe, which is a weeding or hilling to the corn. Now it follows, of course, that all these modes cannot be right; and, to know the proper mode of applying them, it is necessary first to know the fertilizing properties the seed possess.

This, your committee believe, all will concede, is mostly contained in thin oily substances; if so, the matter is at once settled, for this reason: oil is lighter than water, consequently in a wet time, or when the earth is full of water, the oil will rise, being lighter than water; and in its rising, it has to work its way through to the surface; and in this process, the roots of the corn receive its nourishment, consequently it should be placed deep enough to be below the roots of the corn.

Your committee not being acquainted with the principles of chemistry, nor that of analysing, defers any reference to them; but believes them connected with Agriculture, and do not believe that the true system of Agriculture can be carried out without a knowledge of them.

Your committee believe the practice of heating cotton seed in pens or heaps, as is the custom of the country, entirely at variance with the true mode of preparing seed for manure, as it is conceded that oil is the fertilizing property contained in the seed. You readily discover that heating the seed destroys a goodly quantity of the oil. To remedy this, we recommend that the seed be kept dry under shelter until they are wanted for use; and then, with some simple machinery, the seed be so mashed as not to sprout after they are applied as manure, and be applied in their green state.

All of which is respectfully submitted for your consideration.

JOHN W. MOODY, Chairman.

AGRICULTURAL FAIR.

The Fair of the Bowling-Green Agricultural Society, will take place at the Bowling Green on Friday, the 4th of October next, when the following honors will be awarded:

For the best acre of corn,	1st honor.
For the second best do.,	2d honor.
For the third best do.,	3d honor.
For the best acre of wheat,	1st honor.
For the second best do.,	2d honor.
For the third best do.,	3d honor.
For the best acre of oats,	1st honor.
For the second best do.,	2d honor.
For the best acre of cotton,	1st honor.
For the second best do,	2d honor.
For the third best do.,	3d honor.
For the best Georgia raised mule,	1st honor.
For the second best do.,	2d honor.
For the best stallion, Georgia raised,	1st honor.
For the second best do.,	2d honor.
For the best 3 year colt,	1st honor.
For the second best do.,	2d honor.
For the best mare, Georgia raised,	1st honor.
For the second best do.,	2d honor
For the best bull,	1st honor.
For the second best do.,	2d honor.
For the best cow, producing the largest quantity of milk, regardless of blood,	1st honor.
For the best ewe,	1st honor.
For the second best do.,	2d honor.
For the best boar,	1st honor.
For the second best do.,	2d honor
For the best sow,	1st honor.
For the second best do.,	2d honor
For the heaviest hog, from 1 to 2 y'rs old,	1st honor.
For the second best do.,	2d honor.
For the heaviest pig, from 6 to 12 months old,	1st honor.
For the second best do.,	2d honor.
For the best home manufactures, embracing all kinds of fabrics,	1st honor.
For the second best do.,	2d honor.
For the third best do.,	3d honor.

On the above day, there will be an Agricultural Address delivered before the Society, by Joseph H. Echols, Esq., of Lexington.

WM. JEWELL, Secretary.

IRISH POTATOES.

A well informed and experienced farmer says, in the Gardener and Practical Florist, that he is well satisfied that the productive power of seed potatoes is much diminished by suffering them to become over ripe, and he gives good reasons for his belief. He digs the potatoes before the vines are dead, and places those intended for seed in pits dug in a shady, airy situation, not more than six bushels in a pit, covers them with straw, and then with earth two to three feet. In greater bulk they may ferment. He says that the great error is late planting and late harvesting; all kinds should be planted very early, and all should be dug as soon as the growth is completed.

From the Southern Planter.

IMPROVEMENT OF WORN-OUT LANDS.

From a very intelligent traveller, whose acquaintance we happened to make as he was passing through our city, we have received the following communication:

FAYETTEVILLE, Cumberland Co., N. C.

C. T. BOTTS, Esq.

Dear Sir,—In passing through parts of Virginia and North Carolina, I was much surprised to see large fields lying waste, which I was informed had been abandoned as "worn out," whilst the proprietor had substituted new grounds for them, at all the expense and inconvenience of a new home and a new clearing. Beside the sacred and endearing associations which usually cluster around the ancient homestead, a great pecuniary loss must be sustained in the pursuit of this system. It would seem that one-half of the time and labor required to fit a new farm of the crop, would restore the old one. A plan for the improvement of old lands is very successfully practised at the North, which, it appears to me, would be applicable here. It is as follows:

Procure as many bushels of buckwheat as there may be acres to improve, and as soon as the spring opens, plow the fields deep and sow the buckwheat broadcast, and harrow it in.—This on the very poorest lands at the North will yield a quick and luxuriant growth.

As soon as the crop is in full blossom, (unless it has grown so rank as to have lodged of itself,) flatten it to the ground by the use of a roller, followed immediately by the plow, which shall whirl it under. Sow again another bushel to the acre upon the unturned soil, rake it in, and as before, turn it under. Then sow the seed of the largest kind of red clover, which should be suffered to grow to maturity, then to be trampled down and eaten off by stock. To all these crops, one bushel of plaster per acre, applied when they are about one-fourth grown, will vastly increase the amount of vegetable matter, and will also secure a more extended fermentation.

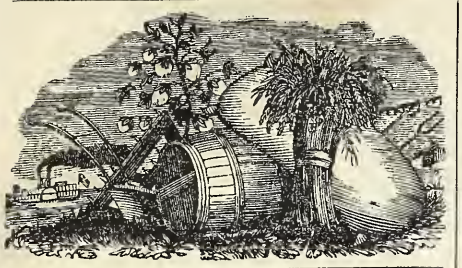
At the end of the second year, all lands thus treated, will be restored to their original fertility. At least, I know from experience that such has been the effect in the more northern sections of the Union, and I do not see why the same result should not follow at the South.

A NORTHERN FARMER.

SIMPLE MODE OF PURIFYING WATER.—It is not so generally known as it ought to be, that pounded alum possesses the property of purifying water. A table spoonful of pulverized alum, sprinkled into a hogshead of water, (the water stirred at the time,) will after a lapse of a few hours, by precipitating to the bottom the impure particles, so purify it that it will be found to possess nearly all the freshness and clearness of the finest spring water. A pail full, containing four gallons, may be purified by a single teaspoon full.

COTTON MANUFACTORY IN CINCINNATI.—The Cincinnati Atlas says that a manufactory for the fabrication of cotton goods is soon to go into operation in that city, under the auspices of three of its most enterprising and respectable citizens, whose known produce is a sufficient guaranty that they have examined the whole ground and are sure of success. The Atlas hails this as an era in the prosperity of the "Queen City" of the West.

☞In cultivating the earth, the condition of man's success is his industry upon it. In raising domestic animals, the condition of his success is kindness and benevolence to them.



WEDNESDAY, MAY 29, 1844.

DANA'S PRIZE ESSAY.—After a suspension of this most excellent essay for the last few numbers of our paper, which was unavoidable in consequence of the misplacing of the only copy we had, we have the pleasure of renewing it in the present number, and shall continue it regularly until completed, unless prevented by a similar occurrence.

ANOTHER AGRICULTURAL SOCIETY.—We hail with pleasure the formation of an Agricultural Society at Busbyville in Houston county, Ga., which we see announced in the Macon papers. The Society was organized by the election of the necessary officers, after which a committee was appointed to draft a Constitution and by-laws for its future government, who should report at a subsequent meeting, which was appointed for the 18th inst.

We avail ourself of the opportunity which this annunciation affords to congratulate the members of the Society upon their organization, and to them singly and collectively the columns of the "SOUTHERN CULTIVATOR" as a medium through which to communicate their views upon any and all subjects connected with the object of their association.

And we take occasion to assure them in common, with all other Agricultural Societies at the South, that it will always afford us a high degree of satisfaction to contribute all in our power to the dissemination of their action upon all matters pertaining to agriculture, or its kindred pursuits, and we earnestly hope they will favor us with whatever they desire communicated to the public, as ours is certainly the most appropriate medium for its first appearance. We trust that this invitation will be considered sufficiently particular and general, not only to the agricultural Societies, but also to all persons who may desire to become contributors to our journal, to induce them to favor us with whatever they may deem of sufficient value to lay before the public.

RAIN.—After an almost continuous drouth for nearly three months, we have the pleasure of announcing that since our last, we have been favored with refreshing and copious showers, which we are gratified to learn from our exchange papers have been very general throughout the country. Although the drouth has been quite protracted for this period of the season, we feel well assured that it can only be productive of good generally should the future be propitious. For it has afforded planters an opportunity to cleanse their growing crops thoroughly, and prepare them for the reception of the genial showers with which we have been favored and of the continuation of which we have now very flattering indications.

EVERY MAN HIS OWN CATTLE DOCTOR, containing the causes, symptoms, and treatment of all the diseases incident to oxen, sheep and swine; and a sketch of the Anatomy and Physiology of neat cattle: by Francis Clater—edited, revised and almost re-written by Wm. Youatt, author of the Horse, &c. With numerous additions on the use of oxen and the improvement in the breed of sheep, &c., by John S. Skinner, assistant Postmaster General: with numerous cuts and illustrations. Philadelphia: Lea & Blanchard. 1844.

A very neat octavo volume, of 251 pages, with the above title, has been sent us by Mr. Skinner; and, in the absence of sufficient leisure to examine its contents thoroughly, we avail ourself of the following notice from that most excellent Agricultural paper, the "American Farmer:"

'As its title would import, it is a most valuable work, and should be in the hands of every American Farmer; and we feel proud in saying, that the value of the work has been greatly enhanced by the contributions of Mr. Skinner. In the selection of his subjects, he has judiciously taken two of the very first importance to the well-being and prosperity of the Agricultural public; for, in our view, nothing can be more so than the use of oxen, and the improvement of sheep. As to the use of oxen instead of horses, in many of the labors of the farm, as a means of economy, there can be no doubt; for no one yet has substituted a well-trained yoke of oxen for a span of horses, that ever found cause to regret the change. With respect to sheep, there is no department of husbandry which needs improvement more, nor none that will repay better for the labor and expense attending such an enterprise Wool is a staple of immense value at the present time as a product of the nation—equal, we should think, to from thirty to forty millions of dollars a year, and may be made more so, as the increasing demand for it by the manufacturers justifies the belief that in a few years, twice the quantity will be needed.

'With then, a present steady and remunerating market for the article, and a prospect of increase and improvement, surely it behooves the farmers to lend their energies not only to the increase of their flocks, but to their *improvement* also, as the sheep which bears *good wool* is as easily and cheaply raised, as one that produces an inferior article, whereas the profit on the staple is greatly in favor of the former.

'We congratulate our agricultural brethren throughout the Union, that our old and esteemed friend, Mr. Skinner, has had a hand in the preparation of this work, as his high order of talents and devotion to the pursuits of husbandry, qualify him to give to the public not only a standard work, but one particularly needed by the necessities of the farming community.—*Clater* and *Youatt* are names treasured by the farming communities of Europe as house-hold-gods; nor does that of *Skinner* deserve to be less esteemed in America, where every farmer, who may at all be conversant with agricultural literature, know that he gave the first impetus to improvement, and has, by his enlightened, untiring devotion to all that belongs to American husbandry, done more to advance its real welfare than any other American writer living or dead. He established the American Farmer, the first Agricultural paper in our country, and from that day to this has given the best energies of his capacious mind to the enlightenment of the public upon matters connected with the enscience of Agriculture. We have always cherished him as a *benefactor* to his country—for none are more entitled to the appellation of being considered such, than he who labors to promote the prosperity of the first of all human callings.

'In conclusion, we commend the book to every farmer and planter, and trust it may find a place in every homestead throughout our land—nay more, that all who may buy it may read and study it well.

EXTRAORDINARY STRAWBERRIES.—Dr. Bayne recently exhibited to the Horticultural Society of Washington city, two jars of strawberries, measuring five inches in circumference, and weighing each two hundred grains; thirty-two of them filling a quart; and for flavor and beauty far surpassed any fruit ever exhibited here. Dr. Bayne has lately given great attention to the cultivation of the straberry, and deserves much credit for having brought this excellent fruit to its present state of perfection.

For the Southern Planter.

EXTRAORDINARY FECUNDITY.

MR. BOTTS—There was an instance of greater fecundity in my neighborhood a few days ago, than I have ever heard of before. Nature made the effort, but the constitutional powers of the animal were not sufficient to accomplish her purpose.

A ewe belonging to Mr. William Applebury, (S. A.) about two years old, became so disabled and diseased from the excessive distension of the uterus, as to make her entirely helpless and apparently dying. Mr. Applebury thought it most humane to have her killed. On examining the contents of the womb, he found four perfect lambs near sufficiently matured for birth. A fine subject for the physiologists.

J. M. W.

CHATHAM, Feb. 17, 1844.

As an accompaniment to the above, we may mention that a gentleman of this city, of the highest respectability, called at our office a few days since and stated, that a sow on his farm in the neighborhood had the evening before given birth to eleven fine full grown pigs, and that about twelve hours after, she produced another litter of ten, about three-fourths matured—evidently the result of a second conception.—ED. SOUTHERN PLANTER.

☞Beware of *little* expenses: a small leak will sink a great ship.—*Franklin.*

CURE FOR A FOUNDERED HORSE.—A correspondent of the Louisville Journal says that if a horse is foundered over night, he may be cured in three hours, if it is attended to in the morning. Take a pint of hog's lard and heat it boiling hot, and after cleaning his hoof well and taking off his shoe, put his foot in the lard, and with a spoon apply it to all parts of the hoof as near the hair as possible. This he has tried for more than fifty years, and never known it to fail. The application should be to the foot of each foundered limb.

The ship Greenock cleared from the port of Mobile on Saturday last, with 4000 bales cotton, being the largest cargo ever cleared from that port. Its weight is estimated at 1,941,091, and its value at $136,163.

HARROWING GRAIN.—We have often (says the American Agriculturist) found great benefit in harrowing grain in the spring of the year, as soon as the ground is well settled and dry, more especially wheat somewhat winter killed. It stirs the earth encourages tilling, and adds to the vigor of the growth of the plant. The harrow should be followed by the roller, so as to replace the roots of the plant which may be laid bare by the harrow, and crowd them in the earth.

The Albany Cultivator says: The horseradish is propagated by sets or by taking the crown of the plant, with a few inches of the root, and burying it in deep rich soil to the depth of eight or ten inches. If the set is split into two or three parts, retaining a part of the crown on each, the plant may be increased more rapidly. Before planting, the ground should be dug and manured to the depth of eighteen inches or two feet. The plants may be set in the spring or fall.

EXPERIMENT.—A Scotch paper says that the Rev. Mr. Ramsay, of Arbroath, commenced digging early potatoes on the 28th of June: after removing the crop, he immediately replanted the stems; and although the first crop was considered good, the second from the stems, was superior, more numerous, larger, and of a better quality. The experiment is worthy of further trial.

CONICAL BRUSHES.—A writer in the New England Farmer recommends a corn-cob fastened to a pole as a good substitute for Pickering's conical brush in removing caterpillars from trees. The editor of the Farmer thinks that any one who allows caterpillars to encumber his trees when he can avoid it by cobbing them, deserves to be "cobbed" himself.

AN INSECT TRAP.—Scoop out the inside of a turnep, scollop the edge of the shell, and place it downward on the earth; the insects will pass into it as a place of retreat, through the holes; and the beds of squashes, melons, cucumbers, &c., may thus soon be cleared of them.

NOVEL METHOD OF WORKING BUTTER.

A correspondent of the American Agriculturist, writing from Montpelier, Vermont, says:

"A very useful and ingenious mode of extracting whey from butter, was recently related to me by a gentleman who had resided many years in the grazing districts of France; and he informed me that a similar apparatus is at present in successful operation, near by here, in this State, although I have not yet seen it. He described it in a manner that could not fail to be understood by any farmer in the Union.

"The machine, he represented as made of wood, in form not much unlike a grindstone, closely fitted into a trough, leaving a space between the stone and bottom of the trough not exceeding a sixteenth of an inch in thickness. The trough is first filled with clean water saturated with salt, one end of which is crowded full of the newly-churned butter. Then the stone is put in motion by means of the crank or otherwise, and the butter is drawn beneath it, and comes out at the other end of the trough in thin sheets, not more than one-sixteenth of an inch in thickness, almost entirely freed from the whey, and for common use requires no further salting. The brine thus prepared, has another very important office to perform. It imbibes, by chemical affinity, all the whey with which it comes in contact, and leaves the butter by itself.

"Although this apparatus is extremely rude and simple, it is obvious to an ingenious mechanic, how easily such a machine could be improved upon, and answer a tenfold purpose."

SOUTH CAROLINA STATE AGRICULTURAL SOCIETY.

In consonance with a resolution passed at the last meeting of the *State Agricultural Society*, the following premiums are offered for stock, at the exhibition to be held in Greenville, on the 2d Wednesday in September next:

For the best Stallion over 5 years old for harness purposes, a silver cup,	$15 00
For the best Stallion, over 5 years old, for saddle purposes, a silver cup,	15 00
For the best Stallion or Colt, under 5 years old, a silver cup,	10 00
For the best Mare or Filly, under 5 years old, a silver cup,	10 00
For the best Mule, over 3 years old, bred by a member, a silver cup,	10 00
For the best Mule, under 3 years old, bred by a member, a silver cup,	10 00
For the best Bull, over 1 year old, a silver cup,	15 00
For the best Bull, under 1 year old, a silver cup,	10 00
For the best Milch Cow, a silver cup,	15 00
For the best Heifer, under 1 year old, a silver cup,	10 00
For the best Boar, over 1 year old, a silver cup,	10 00
For the best Boar, under 1 year old, a silver cup,	5 00
For the best Sow, over 1 year old, a silver cup,	10 00
For the best Sow, under 1 year old, a silver cup,	5 00
For the best Ram, a silver cup,	5 00
For the best Ewe, a silver cup,	5 00

Any citizen of the State, paying 5 dollars before the hour of exhibition, will be thereby constituted a member, and entitled to compete for the premiums. JAMES B. DAVIS, Sec'y.

All the local Societies are requested to send Delegates to this meeting, and Hon. John B. O'Neall is appointed to deliver an address.

Planters are requested to add to the interest of the exhibition, by sending stock to the fair *for sale*, to which the Secretary will *cheerfully* attend.

The following are the awards offered at the annual meeting of the State Agricultural Society, to be held as usual on the 1st Wednesday of the session, in Columbia:

For the best managed Farm, a silver cup,	$20 00
For the greatest product of Corn, per acre, a silver cup,	10 00
For the greatest product of Short Staple Cotton, a silver cup,	10 00
For the greatest product of Sea Island Cotton, a silver cup,	10 00
For the greatest product of Wheat, a silver cup,	10 00
For the greatest product of Rice, a silver cup,	10 00
For the greatest product of Potatoes, a silver cup,	10 00
For the best specimen of Silk Fabric, domestic, a silver cup,	10 00
For the best specimen of Woollen Fabric, domestic, a silver cup,	10 00
For the best specimen of Cotton Fabric, domestic, a silver cup,	10 00
For the best specimen of domestic Cotton Bagging, a silver cup,	10 00

These premiums are offered *only* to the successful competitors of local Societies, and where no local Societies exist, a competitor *may* send a certificate of the fact and exhibit.

All local Societies are requested to aid by authentic facts, the proper decision of the Agricultural Societies in the above awards.

JAMES B. DAVIS, Sec'y.

FOOD AND PASTURE FOR COWS.—In the same animal, says Johnston in his Lectures, the quantity of milk is known to be greatly influenced by the kind of food. This is best understood in the neighborhood of large towns, where the profit of the dairy-man is dependent upon the quantity, rather than upon the quality of his milk. Hence the value of highly succulent foods of the grass of irrigated meadows—of mashed and steamed food—of brewer's grains—of turneps, potatoes and beets—and of other similar vegetable productions, which contain much water, intimately mixed with nutritive matter, and thus tend both to aid in the production of milk, and to increase its quantity.

CONTENTS OF THIS NUMBER.

Annual Report of the Commissioner of Patents....81
Dana's Prize Essay on Manures, (continued); Roots vs. Hay....82
On the Cotton Gin and the Introduction of Cotton....83
Root Culture; Alternation of Crops....84
What is the Proper Food of Wheat; Estimate of the Crops of 1843; Sowing Corn for Fodder....85
Report of the Committee on Manures, of the Bowling Green Agricultural Society; Agricultural Fair; Improvement of Worn-out Lands; Simple mode of Purifying Water; Cotton Manufactures in Cincinnati....86
EDITORIALS—Another Agricultural Society; Every Man his own Cattle Doctor, (Editor's Notice); Extraordinary Strawberries; Extraordinary Fecundity; Cure for a Foundered Horse....87

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DANA'S PRIZE ESSAY ON MANURES.

(Continued from page 82.)

SECTION SEVENTH.

Of the Circumstances which affect the Quality and Quantity of Animal Dung.

That we may reduce to some general principle, easily understood and easily remembered, the facts scattered up and down among the mass of writers and observers about the different quality of manure afforded by different animals, or the same animals at different times, let me, reader, request your company while I walk into a new department of your chemistry. You may not understand the reasons of this difference in manures; why, for instance, fattening cattle give stronger manure than working oxen, without going a little into the mode how animals are nourished. The whole may be stated in plain terms thus: All food serves two purposes. The first is to keep up the animal heat, and this part of food disappears in breathing or in forming fat; that is, after serving its purpose in the animal body, it goes off in the breath or sweat, or it forms fat. It is so essential to the action of breathing, that we will term it food for breathing, or the breathers. The second purpose answered by food is to build up, sustain, and renew the waste of the body.

Now all this is done from the blood. To form blood, animals must be supplied with its materials ready formed. They are ready formed in plants; and animals never do form the materials for making blood. We may, therefore, term this kind of food the blood-formers. We have then two classes of food, the breathers and the fat-formers, and the blood-formers. If we look to the nature of these different classes, we find that sugar, starch and gum, are breathers. Now there are three principles found in plants exactly and identically the same in chemical composition with white of egg, flesh, and curd of milk. Now these three principles exactly alike, whether derived from animals or from plants, are the only blood-formers. I shall not, reader, tax your attention further upon this subject, than to beg you to remember these important facts:—First, all food for breathing and forming fat, contains only these three elements —oxygen, hydrogen, and carbon. Secondly, all food for forming flesh and blood, in addition to these, contains nitrogen.

This is the gist of the whole matter, so far as relates to manure. Bear in mind as you go on with me, reader, this fact, that of all the food animals take, that alone which can form flesh and blood, contains nitrogen. The door is now open for explaining why age, sex, kind of employment, difference of food, difference of animal, can and do produce a marked difference in the value of different manures. And first, let us consider how the quantity is affected. This depends on the kind of food. The analysis of cattle dung, which has been given, is that of cows fed on hay, that is, herds-grass, red-top, &c., (or what is usually termed English hay,) potatoes and water: the cattle kept up the year round. An animal so treated, consumed in seven days—

Water,	611 lbs.
Potatoes,	87 "
Hay,	167 "

During this time she dropped clear dung 599 lbs., or very nearly a bushel of dung a day. Every attention was here paid to accuracy of measurement and weight. The annual amount of dung from one cow exceeds, by this account, that which is usually assigned. But, as it is a matter of some importance for the farmer to estimate what the produce of his stock may be in dung, the following statement, containing the results of a large establishment, will probably give that average.

At this establishment the cows were kept up the year round for their dung. It was collected for use from litter, and measured daily into large tubs of known capacity. The average number of cows kept was fifty-four for nine and a half years. During that time, they consumed of beets, meal, and pumpkins, brewery grains, cornstalks, turnips, potatoes, carrots and cabbages, 942,436 lbs., giving an average of green fodder, for each cow per year, 1,837 lbs. Average consumption of hay for each cow per annum, 8,164 lbs. The total dung for nine and a half years was 120,520 bushels, or per cow per annum, 235 bushels. This gives a daily consumption of green food, 5 lbs., and 22 lbs. of hay per cow, and two and a half pecks of dung per day, or about 56 lbs. per cow.

But according to some experiments made to determine how much the quality of the food affected the quantity of dung, it appears that the solid and fluid excrements partially dried, were, compared with the food, as follows:

In	Cattle. lbs.	Sheep. lbs.	Horses. lbs.
100 lbs rye straw gave d'g,	43	40	42
do hay do	44	42	45
do potatoes do	14	13	
do mangel-wurtzel do	6		
do green clover do	9½	8½	
do oats do		49	51
do rye do			53

My own experiments on this subject gave for 100 lbs. of hay and potatoes as above, estimating both as dry, or free from water of vegetation, 32.9 lbs. of dung; and this estimated as dry, is reduced to 5.6 lbs., or 26 lbs. of dry food gave 14 lbs. of dry dung. But as a general fact, we may say, that well-cured hay and the grains give one-half of their weight of dung and urine; potatoes, roots, and green grass, about one-tenth.

It will be easily understood why the quality of food should affect the quantity of dung. The more watery, the less in bulk is voided, because there is actually less substance taken. And as the animal requires this to form its flesh and blood and fat, and to keep up his breathing, so will he exhaust more completely his food. More going to support him, less is returned by the ordinary channels. So when much vegetable fibre exists, as in chopped straw and hay, then, as it goes but little way towards supporting breathing or forming blood, a greater bulk is rejected. In grains, on the contrary, which afford much of all that the animal requires, more is extracted and less voided.

The Quality of Dung.

It is affected first, by the season; second, by the age; third, by the sex; fourth, by the condition; fifth, by the mode of employment; sixth, by the nature of the beast; seventh, the kind of food.

1st. The season. It is because digestion is worse in summer than in winter, a general fact, that summer manure is best. And where cattle are summer-soiled, it is said the manure is worth double that from stall-fed winter cattle. I do not think much is to be attributed to the worse digestion in summer, but the cause of this great difference in value is to be found in the fact that soiled cattle generally get a large proportion of blood-forming food.

The wear and tear of their flesh is little, and hence, requiring little of their food to keep up their flesh, a greater portion goes off in dung, which thus becomes rich in ammonia. The green plants, rich in nitrogen, afford abundance for milk, which, being rich in all the elements of cream, should afford large returns of butter.

2d. Age. From the fact, that young and growing animals require not only food to form flesh and blood, to repair the incessant waste and change taking place in their bodies, as in older animals, but also a further supply to increase the bulk of their frame, it is evident that their food will be more completely exhausted of all its principles, and that also less will be returned as dung. All experience confirms this reasoning, and decides that the manure of young animals is ever the weakest and poorest.

3d. The sex. This is one of the most powerful of the causes which affect the strength of dung. From the remarks which have been already made, and which I trust, reader, are now fresh in your memory, of the important part acted by nitrogen in dung, it must be plain why sex should exercise such influence. 1st. In all food, as we have explained, that only which contains nitrogen, can form flesh and blood, or substances of similar constitution, that is, requiring a large proportion of nitrogen, as milk. Hence an animal with young, that is, a cow before calving, requires not only materials for its own repair, but to build up and perfect its young. Hence the food will be most completely exhausted of its nitrogen, and consequently the dung become proportionably weaker. 2d. The young having been formed, then milk is required for its sustenance. Milk contains a large proportion of nitrogenous or blood-forming elements, and so the cause which originally made the dung weak, continues to operate during all the time the animal is in milk. Sex, then, it is evident, affects materially the quality of the dung.

4th. The condition. If the animal is in good condition, and full grown, it requires only food enough to supply materials to renew its waste.

Hence the food (supposing that always in sufficient quantity) is less exhausted of its elements, than when the animal is in poor condition. In the last case, not only waste, but new materials must be supplied. If the animal is improving in *flesh*, (and here, reader, I would have you bear in mind the distinction between flesh and fat,) then the manure is always less strong, than when he is gaining fat. There is no manure so strong as that of fattening animals. An animal stall-fed, kept in proper warmth, requires but little of his breathing food to keep up his heat. All the starch, gum, sugar, &c., go to form fat. Having little use for his muscles or flesh, that suffers little waste, and the nitrogen which should go to form flesh, is voided in dung. If it is a she, no milk is given during this period, for a cow in milk fats not.

The dung, then, of fattening animals, contains more of all the elements of food for plants, than at any other period, and is peculiarly rich in nitrogen. I trust, reader, it is not so long since you have met the word ammonia, that you have

forgotten that its source and origin are due to this nitrogen. Now the source of this nitrogen is in the food, and as, during fattening, grain is supplied for its starch, &c., to make fat, and very little waste of the body taking place, the extra nitrogen of the blood-forming materials of grain, is nearly all voided in dung.

5th. The mode of employment. Your working beasts suffer great wear and tear of flesh and blood, bone and muscle, thews and sinews. Hence their daily food supplies only this daily waste; the food is very thoroughly exhausted, and of course the dung is weak. It derives its chief value from the excretions of those parts of the body which are voided as waste materials, among the excrements. There is a distinction to be noted here: excretions are the worn-out flesh and blood elements—excrements, the undigested and unused food: dung includes both excretions and excrements. Now the chief value of the dung of working cattle depends upon the excretions.

6th. The nature of the beast. If his coat is wool, he requires more sulphur and phosphorus, the natural yolk or sweat of his wool, more lime and ammonia, than does the hairy-coated animal. Hence sheep produce manure less rich in many of the elements of plants, than cattle; but as at the same time it contains a larger portion of nitrogen, and is very finely chewed, it runs quicker into fermentation. It is a hoter manure, quick to eat, quick to work, and is soon done.

7th. The kind of food. We have already spoken of this as affecting the quantity of dung. Its effects are no less marked on its quality. Now all that requires to be said on this subject, is to remind you, reader, of the two divisions of food, the fat-formers, and the flesh and blood-formers. It must be evident, that the more of this last the food contains, that is, the more nitrogenous is the food, the richer the dung.---Hence, grains of all sorts, peas, beans, &c., will always give a richer dung than fruits, as apples, &c. The more nitrogenous the hay, the richer the dung. Meadow cats-tail and rye grass are nearly six times stronger in ammonia than oat straw. Red clover is twice as rich in nitrogen as herds grass; wheat, barley, and rye straw, green carrots and potatoes contain only about one-third to one-fifth the ammonia of herds-grass, and turnips only about one-sixth. The quantity of ammonia contained in these different grasses and straws, shows at once the effect they must have in the compost heap. The kind of litter must have no small effect upon the value of manure. And while we are upon this subject, it may not be out of place to mention, that the kind of a green crop turned in, materially affects the value of the process. While the straws of the grain-bearing plants afford for every ton of green crop turned in, about three-quarters of a pound of ammonia, green corn-stalks and herds-grass, about five pounds of ammonia per ton; red clover affords about seventeen lbs. of ammonia per ton. The very great value of clover in enriching land is thus made evident. But to return to the quality of the dung, as affected by the food, it has been proved that animals fattening on oil cake, give manure in value double that of common stock. Here abundance of nitrogen is supplied where but very little is required, and consequently much is voided in dung.

The point to which we have arrived is a breathing place: the remarks which have been offered upon the action of salts, have prepared the way for our entering upon the next section —the second class of manures.

(To be Continued.)

INDUSTRY.

The following anecdote may give encouragement to the industrious:

Not long ago, a country gentleman had an estate of £200 a year, which he kept in his own hands until he found himself so much in debt, that, to satisfy his creditors, he was obliged to sell the half and let the remainder to a farmer for twenty years. Towards the expiration of the lease, the farmer coming one day to pay his rent, asked the gentleman whether he would sell his farm. "Why, will you buy it?" said the gentleman. "If you will part with it, and we can agree," replied the farmer. "That is exceedingly strange," said the gentleman; "pray tell me how it happens that, while I could not live upon twice as much land, for which I paid no rent, you are regularly paying me a hundred pounds a year for my farm, and are able, in a few years, to purchase it?" "The reason is plain," answered the farmer, "you sat still and said *go*—I got up and said *come*—you laid in bed and enjoyed your estate—I rose in the morning and minded my business."

OF THE AVERAGE QUANTITY OF BUTTER YIELDED BY MILK AND CREAM, AND OF THE YEARLY PRODUCE OF A COW.

I have already made you acquainted with some of those numerous circumstances by which the quality of milk is affected. These same circumstances will necessarily more or less affect the quantity of butter also, which a given weight or measure of milk can be made to yield.

Thus, in the King William's town dairy, (County Kerry,) the average quantity of milk and butter yielded by the Kerry and Ayrshire breeds respectively, was, in a whole year—

Ayrshire cow, 1328 quarts, of which nine and a half to nine and nine-tenths quarts, gave one pound of butter.

Kerry cow, 1264 quarts, of which from eight to eight and a fifth quarts, gave one pound of butter.

Showing, as I have before stated, that the small Kerry cow, upon the same pasture, will give a richer milk even than the Ayrshire.

In Holstein and Lunenburg again, it is considered, on an average, that 15 quarts of milk will yield one pound of butter. The milk in that country, therefore, must be very much poorer in butter.

The result of numerous trials, however, made upon the milk and cream of cows considered as good butter-givers, *in this country*, has established the following average relation between milk, cream and butter:

MILK.		CREAM.	BUTTER.
18 to 21 lbs. / 9 to 11 qts.	yield	4 lbs. / 2 qts*	or 1 lb.

The cow, therefore, that yields 3,000 quarts of milk, should produce, where butter is the principal object of the farmer, about 300 lbs. of butter, or 1 lb. a day, for 300 days in the year.

This is not a large daily produce, since some cows have been known to give, for a limited time, as much as two or even three pounds of butter in a single day. It is a large quantity, however, taken as the average of a lengthened period of time, and hence such cases as that of Mr. Cramp's cow, which, for four years, continuously yielded nearly a pound and a half of butter† every day, are naturally quoted as extraordinary.

In most districts, the average of the whole year is much less than a pound a day, even for ten months only. In Devon, for the first twenty weeks after calving, a good cow will yield 12 quarts a day, from which, by the method of scalding, a pound and a quarter of butter can be extracted.

In South Holland, a good cow will produce, during the summer months, about 76 lbs. of butter. In the high pastures of Scaria, in Switzerland, a cow will yield, during the ninety days of summer, about 40 lbs. of butter, or less than half a pound a day. In Holstein and Lunenburg, it is considered a fair return if a cow yields 100 lbs. of butter, and even in England, 160 to 180 lbs. is reckoned a fair annual produce for a cow, or from 8 to 9 ounces a day, for ten months in the year.

It is known that the butter produced in one district of the country differs often in quality from that produced in another, even though the same method of manufacture be adopted. In different seasons, also, the same farms will produce different qualities of butter; thus it is said that cows which are pastured yield the most pleasant butter in May, when the first green fodder comes in; that the finest flavored is given by cows fed upon spurrey (Sprengel); that it is generally the hardest when the animal lives upon dry food; and that the autumn butter is best for long keeping. These differences may all be ascribed to varieties or natural differences in the pasture or fodder upon which the cow is fed.* The constitution of the animal also is known to affect the quality of the butter—since there are some animals which, with the best food, will never give first-rate butter.

In all such cases as these, however, the quality of the butter is almost entirely dependant upon that of the milk from which it is made, so that whatever affects the quality of the milk, must influence also that of the butter prepared from it.

But from the same milk, and even from the same cream, by different modes of procedure, very different qualities of butter may be obtained. The mode of making or extracting butter, therefore, is highly worthy of attention. Let us consider a few of the more interesting circumstances under which different qualities of butter may be extracted from the same quality of milk or cream.

If the milk be collected in two or three successive portions, as it comes from the cow, the last drawn portion will be much richer than that which has been taken first. The cream yielded by it will also be richer, and of a finer and higher flavor. Whether, therefore, the butter be extracted directly from the whole milk, or from the cream, the butter obtained from the three successive portions will differ in quality almost as much as the several portions of milk themselves.

A practical application of this fact is made in some of the Highland counties of Scotland, and in other districts, where the calves are allowed to suck, or are fed with, the first half of the milk as it comes from the cow—the latter and richest half only being reserved for dairy purposes. This second milk is found to afford an exquisite butter.

In like manner, the first cream that rises upon any milk is always the richest, and gives the finest flavored butter. The after-creamings are not only poorer in butter, but yield it of a whiter color and of inferior quality.

This fact again is well understood, and has been long practically applied in the nighborhood of Epping, which is celebrated for the excellence of its butter. The cream of the first twenty-four hours is set aside and churned by itself. The second and third creams produce a pale, less pleasant butter, which always sells for an inferior price. Any admixture of the after-creamings causes a corresponding diminution in the value of the butter produced. To produce the most exquisite butter, the cream of the first eight hours only ought to be taken.

The rapidity with which cream rises to the surface, either naturally or when influenced by art, affects the quality of the cream, and consequently that of the butter made from it. In warm weather it rises more quickly than in cold, and more quickly still when the milk is heated, as in the preparation of clouted cream. The butter---Bohemian butter---obtained from such cream---from cream thus rapidly brought to the surface---may be expected to differ both in flavor, in consistency and in composition, from

*The quarts spoken of in this lecture are old wine quarts, of which five make an imperial gallon. A wine gallon of milk or cream weighs about 8 lbs. 4 oz., an imperial gallon about 10 lbs. 5 oz. About two imperial gallons, therefore, should yield a pound of butter.

†It gave, in four years, 2,132 lbs. of butter from 23,559 quarts of milk, or 16 quarts a day, of which 11 quarts gave a pound of butter.

*The influence of the food given in the stall, and of the plants eaten in the pasture, upon the color and flavor of the butter, is familiar to all practical men. The turnipy taste of the butter in winter—the garlick taste in summer, where the wild onion grows in the pastures—and the alleged effect of raw potatoes in winter, in giving a rich color to the butter, are common examples of this kind

that yielded by the cream of the same milk when allowed to rise in the usual manner.

For the production of the best butter, it is necessary that the cream should be sufficiently sour before it is put into the churn.---*Lectures on Agricult. Chemistry.*

From the N. E. Farmer.

CLOSE PLANTING OF CORN.

Mr. Breck:—I have sometimes thought that if farmers would communicate the results of unsuccessful experiments, through the medium of the agricultural journals, they would confer as great a benefit upon the public as they do by relating their successful experiments. In accordance with the above opinion, I will attempt to give the result of close planting of Indian corn the past season, though at the risk of being somewhat tedious.

In the spring of 1841, in consequence of the removal of an old fence, I had a strip of pasture land fifteen rods in length and two rods in width, added to a field. It was plowed up and planted with potatoes, and yielded a fair crop. In the spring of 1842, there were carted upon it four cart-loads of good stable manure, and deeply plowed; after laying a few days, it was harrowed, and four more loads of good compost manure, made of swamp muck, stable dung, lime, and ashes, were spread, and again plowed and harvested. About the 10th of May, drills were made by a kind of horse-rake, with the teeth just three feet apart; three kernels of the "brown corn" were dropped in the drills, at the distance of two feet; in a few days the corn came up, and grew rapidly; during the season, the ground was merely scraped over with the hoe three or four times, but no hills made. In October, when fully ripened, the corn was harvested, and produced over thirty bushels of large sound ears, and two bushels of small ears; and I think it would, when dry enough for the market, have shelled out 15 bushels, or at the rate of 75 bushels to the acre.

I intended to have sown it last spring, with oats and grass seed, but upon reading in the N. E. Farmer of March 22d, 1843, an account of a premium crop of corn raised in New York, by a Mr. Phelps, I was led to plant the patch again with corn, upon his plan. In his statement of the cultivation, &c., he says: "On the 23d of May, 1842, I plowed up one acre of green sward, for the purpose of planting it with corn. After plowing it once, I harrowed it well, lengthwise of the furrows. I then marked out the ground so that the rows and hills should stand precisely two feet apart either way. On the 25th of the same month, I planted it, and was careful to put precisely three kernels in each hill; when it was large enough, I hoed it, and continued to hoe it three different times. No other tool was used in the process of cultivation but the hoe, being very careful to keep the weeds and grass down as much as possible, and in hoeing, to leave the ground as near level as possible each time. I permitted the corn to stand until it was fit for harvesting, without cutting up or topping. Between the 10th and 15th of November, I began to husk and weigh the said corn. I found the aggregate weight from the said acre, in the ear, 13,286 lbs., of a good quality. About the first day of January, 1843, I thrashed out all the sound corn that grew on the said acre, and measured it, and found that it fully held out 60 lbs. to the bushel, and it produced me 122 bushels of good merchantable corn."

After reading the above statement, I thought I would try my small patch of ground again with corn, as before stated. I gave it the same preparation of manure, plowing, and harrowing, that it had the year previous: it was planted about the 12th of May, precisely as to the distance and seed, as Mr. Phelps says he planted his. It came up well, and on the first of July I thought I should get a real *crack* crop—something to brag about—notwithstanding several old grey-headed farmers told me that it was planted so thick, it would not amount to much except for fodder. In August, I began to think these old farmers knew a thing or two; for the bottom of the plants 12 or 18 inches, assumed a yellow color, and but few of the suckers tasseled out, but shrivelled up and dried; the ears that started, (two or three to every stalk,) stood perfectly erect, and did not "hang off" as they did the year before. However, when ripe, it was harvested, accurately measured, and instead of thirty bushels of ears, as I had the year previous, there was but eighteen bushels. As every thing was as favorable to the crop, except its close planting, I can conceive of no possible reason why it should not have been as good as the previous one, except the difference was caused by the close planting, which caused the corn to "draw up" spindling and weak.

From some experience of my own, and observation in the cultivation of corn by others, I think Mr. Phelps' method of culture is worthy of imitation, except the close planting. Several years ago, I planted a field of corn, and dropped two or three kernels extra in each hill, for fear the worms might take a part of them. At weeding or first hoeing, I pulled up a part of the surplus, and was surprised at the length of the root —not roots—as there was but one, the main root, which I frequently found had grown to the length of eighteen inches; and as the rows were three feet distant, I found in some instances that the roots from the opposite hills had met, and believing that all the roots sent out by plants are needed for their most perfect growth, and frequently having heard farmers complain of the injury done to their corn by the worms eating off the roots, I came to the conclusion that it made no difference with the corn whether its roots were cut off by a worm, a plow, or a cultivator. And knowing that neither a plow or cultivator could be run between the rows without cutting and lacerating the roots, I have never suffered any tool but the hoe in my cornfields since—although I have one of Prouty & Mears' horse-plows, a prime cultivator purchased at your store several years ago, and a steady horse to draw them. Since I have adopted this plan, I have had the satisfaction of knowing that my corn crops will compare, as to the quantity per acre, with any of the farmers in this vicinity.

Mr. P's plan of leaving the stalks uncut, no doubt added many bushels to his crop. For two years past, I have left an acre or two till harvesting, with the full belief that I gained more in the corn than I lost in the fodder, though I have my doubts about the fodder being very much less valuable than when cut in the usual way.

I have had the stalks and butts mowed away after husking, and given them a good sprinkling of salt, and my cattle have eaten them as freely and as clean as when cut and bundled up.

I think there can be no doubt that the quantity of corn is lessened to the amount of eight or ten bushels to the acre, by cutting the stalks, as is generally practiced. Careful and accurate experiments of the Hon. Wm. Clark, jr., of Northampton, and others, have put the question beyond dispute.

But a knowledge of the use and function of the leaf would, without an actual trial, satisfy any one of the fact. The moisture or water in the soil holding in solution a variety of salts, is taken up by the rootlets of plants, and by some mysterious power, propelled through the minute pores, or sap-vessels to the leaf, where, aided by solar light, (the rays of the sun,) a large amount of water escapes by evaporation, and the true sap is formed in the leaf, and by the vital powers, or action of the growing plant, the salts are retained to be assimilated, and assist in forming the complete and perfect plant, in all its varied parts and products. Now if the stalk of corn is cut off just above the ear, with all its long and broad green leaves, we violate the laws of nature and deprive the seeds of a portion of that food that would have been elaborated by the agency of the leaves.

The function of the leaves of plants, and the effect of the rays of the sun, in causing a greatly increased absorption of water by the roots, and consequently a corresponding ratio of moisture by the leaf, is very clearly and simply illustrated, by an experiment recommended last year by Professor Henslow, to the farmers of one of the counties in England. He directs that three tumblers, numbered 1, 2 and 3, be nearly filled with water, then oiled paper tied over the top of each tumbler, a hole made through the centre of each paper, and the stem of a leaf of a tree, (with the leaf attached,) be passed through the hole in the paper, so as to touch the water. No. 1, is to have an inverted tumbler put over it, and placed in the direct rays of the sun. No. 2 is to have an inverted tumbler put on, and placed in the light, but so as not to have the sun shine upon it; and the tumbler placed over No. 3, is to have a fold or two of paper wrapped round it, so as to exclude the light, and then placed over No. 3. The result will be as follows:—No. 1, placed in *sunshine*, will soon have the inside of the top tumbler coated over with moisture, which will be in such quantities as to trickle down the sides. No. 2 will have a very little moisture on one side—and No. 3 will have no water within. This little experiment proves that corn, potatoes and roots, should be planted at such distances as freely to admit the sun's rays, and that the amount of corn is lessened by cutting the stalks, and that the plucking of the leaves of mangold-wurtzel and turneps, for green fodder, must be attended with loss to the bulbs.

Every body knows that plants suffer by being in the shade, if the ground is ever so richly manured; and this experiment tells the why. In some parts of Russia, wheat is fit to harvest in six weeks from the time it is sown: their days contain 20 hours of broad sunlight, and that tells the wherefore.

But the leaves of plants have another important office to perform: they possess the power of absorbing the principal part of their carbon from the atmosphere in the form of carbonic acid, which is decomposed by the leaf, (with the aid of sunlight,) the oxygen is liberated, and the carbon retained, and forms about 44 per cent. of the solid or woody texture of plants. If the effect of the sun's rays upon growing plants were more generally understood, the plants in many of the gardens would not be left so thick. Many persons seem to go upon the principle that the more cucumber and melon vines there are in a hill, (and the hills two feet apart,) the more fruit they will obtain. I have frequently seen twelve or fifteen plants left in the hill, and the owner would about as soon have had one of his teeth extracted, as one of the plants pulled up.

L. B.

From the Albany Cultivator.

IMPROVEMENT OF CLAY SOILS.

Messrs. Editors—What method shall I take to reclaim worn-out land? soil, stubborn clay. Will leached ashes or lime effect a cure? If so, what proportion to the acre?

E. H. Northrup.

Shoreham, Vt., April 5, 1844.

The great trouble with a clay soil, is its tenacity. The compactness of its particles keeps, in wet weather, too much water on the surface; and in dry weather it 'bakes,' as we say—becomes so hard that it absorbs but little moisture, and cannot be penetrated by the roots of plants. Thus, on clay soils, vegetation is very likely to suffer in turns, both from an excess, and a deficiency of moisture.

To guard against these difficulties, the first object should be to break this obstinate tenacity by a thorough loosening. To keep the vegetable matters near the surface, where, especially on such soils, they are most effective in aiding the growth of plants, we would turn a rather thin furrow with the common plow, and follow with a sub-soil plow, running it as deep as the implement and the strength of the team would permit. This would allow the surplus water to pass readily into the earth—the roots of plants would easily find their way in search of food—while, in time of drouth, the exhalation of mois-

ture from below, as well as its absorption from the atmosphere, would be facilitated, and the growing crop would thus be protected from the evils of too much moisture at one time, and too little at another.

As to the kinds of manure to be used, we should endeavor to apply such as would tend to correct, as much as possible, the defects of the soil. From our own experience, we should not expect much benefit from the use of ashes—their effects are more favorable on sandy soils. We would try both lime and gypsum, and if their effects proved to be such as would render their application profitable, should use such quantities as seemed expedient. We should endeavor to induce the growth of clover, and if that crop could be made to flourish, it would be found a certain and great improver of the soil; and should gypsum operate well, a high degree of fertility might be gained by the use of that substance in connexion with clover. Animal manures of all kinds, if they can be had, should of course be applied, as they are valuable on soils; and if there was a chance to obtain saw-dust conveniently, and at small expense, we would use it liberally, having witnessed its effects in improving tenacious soils.

It is proper to observe, that, if draining should be necessary, that should be the first object of attention. The loosening of the soil, as above mentioned, will operate as a considerable drainage; but actual observation only can determine whether it will be sufficient.

From the Michigan Farmer.

THE PHYSICAL EDUCATION OF WOMAN.

BY GEO. W. CARHARTT.

Who can look abroad upon society, and compare those that are just entering upon the stage of action, with those who occupied it fifty years ago, and say that the present generation is not far inferior in beauty and physical strength.—Compare the wasp-like waist, the contracted lungs, the pale emaciated face, the irregular teeth, the sunken eyes—and, in fact, an almost complete prostration of all the powers, both mental and physical, (for it is a well established fact in science, that a given state of mind or body throws the other into a corresponding condition,) with the fair symmetrical form, the large, expanded and healthy lungs, the full, fair and animated face, the beautiful and regular teeth, the sparkling and lively eyes, the noble and healthy appearance, and the consequently strong mental and physical powers of the women of this country in by-gone days, and of other countries at the present time, and there will be found a vast difference in favor of the latter.

Investigation makes it evident that a large proportion of young ladies from the wealthier classes have the incipient stages of the curvature of the spine, one of the most certain and fruitful causes of future disease and decay. Medical men, who have made extensive inquiries, say that one of every five or six of the young women at boarding-schools, are affected in this way, while many other indications of disease and debility exist in cases where this particular evil cannot be detected. Why is this enfeebled state of the constitution ?—why does the primeval curse show itself more plainly now, than in former days?—why are the females of this country, at the present time, so much more subject to disease than those of former years? The reason is, their physical education is almost totally neglected, while they receive an improper and injudicious bodily training; hence the very design of their creation is frustrated. The organs of the body are hindered from performing their distinct and proper functions. And as soon as they are called to the responsibilities and trials of domestic life, their constitution fails, and their whole life becomes a burden: for no person can enjoy existence, when disease throws a dark cloud over the mind, and incapacitates her from the proper discharge of every duty.

There is not sufficient attention directed to that course of instruction and treatment which relates to the vigor and improvement of the bodily powers. The influence of the body on the mind is universally admitted. When the former is healthy and active, the latter becomes susceptible of so much the higher and more successful efforts: whereas a feeble constitution tends to the production of mental imbecility; materially lessens our usefulness; and throws a hue of sadness over all the scenes of life. Now our constitutions, our bodily powers, are very much at the mercy of those who control our physical education. A neglect on this particular is often followed by immediate misery. It is from such neglect that we are so often called to mourn over the premature extinction of brilliant genius; and such neglect has been too commonly practised in relation to female children. Many have become victims to it, throughout their whole lives—have suffered from perpetual irritability, pulmonary weakness, morbid sensibility, fickleness of purpose, inconsistency of conduct, and all the distressing agonies of nervous debility; and finally a premature death is the inevitable consequence. There is, doubtless, a constitutional difference in the sexes, and woman is not to be trained to the severe athletic exercises of men; but surely the former ought to have the benefit of all such becoming exercises as shall give them healthful bodies and firm nerves.

"Let the utmost attention," says the Rev. Mr Burrows, "now be paid to the physical education of females—not simply to their diet, temperance, and cleanliness, but to the proper treatment and training of the body. Let them have such physical recreation as shall be consistent with their delicacy of sex, and as shall serve to procure for them vigorous constitutions, and sound minds.—Strengthen their physical powers and you may give energy to their intellects, brilliant tints of beauty to their persons, animation to their spirits, and grace to their manners. Walking, riding, and gardening, in the open air, are practised by women of other nations to a far greater extent than by American females. Most English women in the wealthier classes are able to walk six or eight miles without oppressive fatigue, and when they visit this country, always express their surprise at the inactive habits of the American ladies. An English mother at thirty-five or forty is in the full bloom of perfected womanhood—as fresh, as fair, and healthy as her daughters. But where are the American mothers who can reach this period unfaded and unworn? If the daughters of this favored land would be fair, beautiful, healthy, and long-lived, they must exercise more in the air, and attend more to the improvement of their bodily powers. Exercise is not less necessary than food for the preservation of health. Those who labor are not only the most healthy, but generally the most happy part of mankind. Exercises in walking, riding, and gardening, are calculated to greatly improve the constitution, and give vigor and health to the whole system. There is nothing, perhaps, that tends more to improve the minds and bodies of females, than the cultivation of flowers: it awakens the highest and most refined feelings in the human mind. Here may be seen, by His beautiful works, the invisible God. A taste for flowers has always been regarded by the most learned mental philosophers as a symbol of a pure and virtuous mind; a high and refined state of moral feeling: it indicates a great susceptibility of improvement; and is the natural language of the most noble faculty in the mind of females."—What a beautiful occupation for the young ladies of Michigan to be engaged in: how happily may be spent a few leisure hours in the morning, when the glorious sun is just emerging from the eastern horizon, and all nature is clad in her beautiful livery! It is then that the mind is filled with hallowed emotions of adoration and praise. It is then that may be improved, to the very best advantage, both mind and body. Let strict attention be paid to the physical as well as mental education of the young women of this country, and we shall soon see health glowing in every countenance, beauty beaming from every eye; and they will reap as their reward, vigor and strength of mind and body—a happy and long life.

West Bloomfield, Mich., April, 1844.

From the Southern Planter.

WHITEWASH AND PAINT.

Mr. Editor—There is, in the domestic habits and management of the people in the Northern (I will not use the term "free" in contradistinction) and Southern States, nothing more striking than the difference in the appearance of the dwelling, out-houses, garden and other fences; especially all those about the homestead. In the North, all looks neat and fresh, with their houses and yards as if newly painted or whitewashed; their porticoes shaded and ornamented with the honey-suckle and multiflora, their little green plats before the door fringed with beds of roses, pinks and heart's-ease. How different in the South!—*in too many instances*, houses dark and dingy—windows broken—palings broken down—gardens demolished and lawns large enough for a New England plantation, rooted up by hogs, or grown up in weeds. I repeat, that though this state of things is not so universal as to make it characteristic of the large plantations of the middle and Southern States, this side of the Delaware—it yet exists to an extent which reflects any thing but credit on their proprietors. Surely those whose establishments exhibit this slovenly exterior, do not reflect that the passer-by who sees it, is apt to suspect that interior management is in some correspondence with external appearances. Let it not, however, be therefore inferred that the lady of the house is neglectful of what it is her province to look after—for what can she do, unassisted with means or materials? Let her have but a little help, a little encouragement in the way of kind words, and a small outlay—one hour in the week of "the hands on the place," with one or two dollars laid out in lime for whitewash, and a few flower seeds, a hammer, a gimblet, and a few pales and nails to patch up the enclosure, and what a difference it would make in the *little territory* reserved for the dominion of the housewife! How unjust, not to say cruel, to withhold all supplies, and yet make her bear the responsibility of the home department! The very thought of it always so fires me with indignation, that I could write a sermon if time and words were at command. But I only meant, without a word of comment, to send you, for preservation in the Planter, the accompanying recipe for making the best sort of substitute for paint—let it go to your readers, that no excuse may be left for not having their houses wear that outward appearance of cleanliness and attention to looks, which betokens pure morals and a cultivated taste within.

Washington, April 22, 1844. J. S. S.

"Brilliant Whitewash.—Many have heard of the brilliant stucco whitewash on the east of the President's house at Washington.—The following is a recipe for making it, with some additional improvements:

"Take half a bushel of nice unslaked lime, slake it with boiling water, covering it during the process to keep in the steam. Strain the liquid through a fine sieve or strainer, and add to it a peck of clean salt, previously well dissolved in warm water; three pounds of ground rice, boiled to a thin paste, and stirred in boiling hot: half a pound of powdered Spanish whiting, and a pound of clean glue, which has been previously dissolved by first soaking it well, and then hanging it over a slow fire, in a small kettle, within a large one filled with water. Add five gallons of hot water to the whole mixture; stir it well, and let it stand a few days covered from the dirt. It should be put on quite hot; for this purpose it can be kept in a kettle on a portable furnace. It is said that one pint of this mixture will cover a square yard upon the outside of a house, if properly applied. Brushes more or less small may be used, according to the neatnesss of the job required. It answers as well as oil paint for wood, brick, or stone, and is cheaper. It retains its brilliancy for many years.

"There is nothing of the kind that will compare with it, either for inside or outside walls. Coloring matter may be put in, and made of any shade you like. Spanish brown stirred in will make red or pink more or less deep, according to the quality. A delicate tinge of this is very pretty for inside walls. Fine pulverized common clay, well mixed with this Spanish brown before it is stirred into the mixture, makes a lilach color. Lampblack in moderate quantities makes a slate color, very suitable for the outside of buildings. Lampblack and Spanish brown mixed together produce a reddish stone color. Yellow ochre stirred in makes a yellow wash; but chrome goes further, and makes a color generally esteemed prettier. In all these cases, the darkness of the shade will of course be determined by the quantity of coloring matter used. It is difficult to make a rule, because tastes are very different; it would be best to try experiments on a shingle, and let it dry. I have been told that green must not be mixed with lime. The lime destroys the color, and the color has an effect on the whitewash, which makes it crack and peel.

"When walls have been badly smoked, and you wish to have them a clean white, it is well to squeeze indigo plentifully through a bag into the water you use, before it is stirred in the whole mixture.

"If a larger quantity than five gallons is wanted, the same proportions should be observed."

This, says the Editor of the Planter, is the third or fourth time that, by particular request, we have published the above recipe, which we have no doubt is an excellent one. But after all, we believe that white lead, especially at the low price at which it can be purchased at present, is the best and most economical pigment that can be used. At any rate, this is the experience of our Northern friends, who are proverbial for their economy and management. They paint every thing, except the ladies' cheeks, and that nature does for them in a manner to surpass even the purity of their beautiful cottages.

We intend to furnish directions for the mixing and laying on of white paint, so that every farmer may become his own painter. It is an operation much more simple than is generally imagined.

From the Southern Planter.

SMALL FARMS.

Mr. Editor—The great error committed by a very large majority of farmers is to cultivate too much land. The conduct pursued by a young farmer in my part of the country forcibly impressed this truth on my mind. He commenced farming on a tract of ordinary land, and influenced by the example of those around him, planted seventy thousand tobacco hills on slightly manured land; two hundred thousand corn hills on broom-straw and *hen-nest grass* land; he sowed one hundred bushels of wheat succeeding his corn crop; and in return for diligent cultivation and a continual hard press during the working season, he gathered eight or ten thousand pounds of tobacco, five hundred bushels corn, and two or three hundred bushels of wheat. This system was pursued by him for several years, with about the result above stated. Now, sir, how many farmers in Eastern Virginia are there who pursue the same course with similar results? Perhaps four-fifths, or may I not say nine-tenths? That is at least the proportion within my observation.

I will pursue the history of my farmer for their especial benefit. I have said he had a tract of ordinary, I might have said poor land; he had something else worth a little more than his land; he had a strong mind stored with a good stock of practical sense. He concluded there must be a better way of getting along than the one he was pursuing, and that he would try by doing less work, to make more money; a notion which I dare say the most of us are willing to adopt. He cut off nearly two-thirds of his crop, thirty thousand tobacco hills; next, he made less than one hundred thousand corn hills. He concentrated all the fertilizing means which he had expended before upon the larger surface, upon the more limited one, and at the close of the year, he gathered a little more crop than he had ever made before. Now this was encouraging, was it not? As he had expended a little more than one-third of the labor, he had nearly two-thirds of his time, to devote to some other, and he hoped more profitable employment; that time he employed in gathering materials to make manure. Adhering strictly to a small crop well manured and diligently cultivated, he has now the pleasure of gathering at the close of each year about double as much as he did in the beginning, besides having in tobacco an article worth as much again per hundred as formerly. He cultivates no land which will not well remunerate for the labor expended; and in addition to the ordinary means of manuring, he uses gypsum freely on his growing crop, and thought a year or two ago, when tobacco was higher than it is at present, that every barrel of gypsum applied to his growing tobacco, benefitted him fifty dollars.

I am here reminded of the remedy for flies in the tobacco plant bed. Is it generally known that one gallon of gypsum mixed with one gallon of corn meal, is sufficient to sprinkle over a plant bed of two hundred square yards, and if repeated as often as it disappears, answers the twofold purpose of preventing the ravages of the fly, and is the best manure for plants known?

I will conclude this communication, as it is already too long, by stating what would scarcely be credited, that the example of the farmer, above alluded to, is lost upon his neighbors.—Men are so wedded to old habits, that they pursue the old plan, of large fields, hard work, and small profits. The occupation of cultivating the soil is certainly a delightful one, but to look upon gullied hillsides, perpendicular plowing, and, as a necessary result, corn-stalks a little larger than broom-straws, is enough to cool down the most ardent zeal, and give it over to the management of the ignorant "drawers of water and hewers of wood."

Berkshire Hogs.—I do not know an individual who has mixed the Berkshire in his stock, or attempted to raise them exclusively, whose stock has not materially deteriorated. I know several who used to raise an abundance of pork and a surplus for sale, who now are dependant on Kentucky for their supply. I have never had one; my objection to both Berkshire and Nobone is one that would be laughed at by the Yankee; legs too short, and body too large: they require too much food, and have too little ability to get it. Give me something of the S. Carolina Sand Hill hog, a hearing ear, (at least in acorn time,) a light body, and long legs, then a good range, and I will ensure meat enough.

X. R. S.

Nottoway, April 25, 1844.

From the Southern Planter.

CATTLE DISTEMPER.

Mr. Editor—During the past year, there prevailed extensively in some portions of the upper country a disease among cattle no less fatal than common; during the prevalence of which, some of the finest cows and oxen to be found perhaps in the State, lost their lives. It commences generally very suddenly, without any signs of previous debility or disease, and runs its course in most cases in the short space of twenty-four hours. It seems to affect the head more than any other part of the system, producing great stupor and debility, perfect loss of appetite, and invariably *lock jaw*. The poor creature thus situated, continues to pine away, being unable to receive food into its stomach until it finally perishes for the want of nourishment. Perhaps there is no situation in which you can imagine an animal to be placed more calculated to excite our sympathies than the one under consideration. The disease was treated in various ways and by numerous remedies, when it first made its appearance, and all alike were equally inefficient, until finally the treatment we propose to offer in as few words as possible, was adopted. So soon as the disease makes its appearance, and before lock-jaw has taken place, a large dose of spirits of turpentine mixed with a table-spoon full of castor oil should be immediately administered in as much gruel as the animal can be made to swallow. The turpentine should amount to two or three table-spoon fulls. As soon as this has been accomplished, a large orifice should be made in the large vein of the neck, and two or three quarts of blood should be drawn; immediately after which, the spirits of turpentine should be rubbed on the neck and head. By following out this plan of treatment, and at the same time paying attention to the stall in which the animal is kept, the lives of many which otherwise would be lost, will be preserved.

Yours, &c,, L. B. A.

Richmond, Va., Jan. 12, 1844.

From the Maine Cultivator.

GREEN AND DRY WOOD.

A cord of wood whilst green, is said to contain 1.443 pounds of water, or one hogshead and two barrels. Let every farmer who hauls wood to market, remember that when he transports it green, he is carrying that weight and quantity of water on this load, which, if he had suffered his wood to remain after it was cut till it was suitably seasoned, he might save from the burden of his oxen or horses, or pile upon the top of it three-fourths of a cord of seasoned pine, and yet have no heavier load than the green cord alone weighed.

From the Farmer's Cabinet.

THINGS THAT I HAVE SEEN.

I have seen a farmer build a house so large and fine that the Sheriff turned him out of doors.

I have seen a young man sell a good farm, turn merchant, break and die in an insane hospital.

I have seen a farmer travel about so much, that there was nothing at home worth looking after.

I have seen a rich man's son begin where his father left off—wealthy; and end where his father begun—pennyless.

I have seen a worthy farmer's son idle away years of the prime of life in dissipation, and end his career in the poor-house.

I have seen the disobedience of a son "bring down the gray hairs of his father to the grave."

From the Southern Planter.

CLOVER, HERDS-GRASS, AND TIMOTHY.

Mr. Editor—I was much amused and gratified at the style in which you commented on the sayings and doings of the Farmers' Club of Henrico at their last meeting in October; and as clover formed the subject of discussion, I resolved at the time to give you the following hints as to the manner of curing it. After cutting, let it lie as long as possible without burning, and then put it up in the following manner: Cut for each cock three sticks, eight or nine feet long; stick the ends in the ground, about two feet apart, and tie the tops together with a rope of hay; then get a cedar log, and thrusting one end in between the foot of two of the upright sticks, let it remain in the base of the tripod; leave a limb upon the other end by which you may draw the log out when required; stack the clover, or other hay, against the sticks and over the log; then draw out the log; an opening will be left that will furnish free circulation for the air, and the clover will be very rapidly and perfectly cured. I have put up hay in this way whilst it was raining, and found it most excellently cured.

On the subject of herds-grass, permit me to ad

one word to what has been already written. Very poor and very dry land will bring it, if managed properly. It should be sown with oats or at the time of laying by your corn; turn in the product next year, and follow the plow with a roller; then harrow lightly, and sow timothy and roll again; then add a little top-dressing in the fall or early in the spring, and you will cut a good crop of grass. Our grasses do not penetrate deep enough to get the benefit of the soil on account of the dryness of the climate, and they, therefore, suffer much from the drought; but when the surface is inverted and the sod is kept unbroken, the grass puts up backwards, and the growth, even without manure, would astonish any one who saw it. If you are sceptical, just come out about the 10th of June, and you will then see for yourself. Let there be no mistake about the time the grass is plowed under; this should be done, if the grass is to be cut, immediately after the scythe; otherwise, when the heads are dry, and when the stalks are green, but ripe.

Timothy is a different thing from herds-grass; it is a complete bulb or root, of the shape of a wild onion. When it is cut, this strong root, if left to itself, sprouts promptly and sends out two or three shoots. If, in this sprouted, green and growing state, it is turned under so deep as to be beyond the influence of the sun and air, it must rot, of course: but if it is turned under only two or three inches deep, it comes through, and is greatly strengthened. I am now certain, that any land that will bring broomstraw, will bring good grass.

The farm I live on had not one thousand spires of good grass on it four years ago, and now, although no manure was ever put on a blade of grass, I cured 40,000 lbs. last year, notwithstanding I lost from five to ten thousand weight for want of hands to save it. This year I hope to reach 60,000 lbs. If the Farm Committee of the Agricultural Society will call on me from the 5th to the 20th of June, and will award a premium for "the most made from the least spent," I shall be happy to see them.

In my next, I will furnish you with a plan to enable poor farmers to make poor lands rich, which has forced itself on my attention, as it affords more, in my opinion, for the amount expended than any other plan I have seen recommended.

Yours, respectfully,

J. H. D. Lowndes.

Brookland, April, 1844.

From the American Agriculturist.

THE COW-PEA. PEACH, &c.

The Cow-Pea as a Fertilizer, its Culture and value for Fodder.—I am convinced, from the limited experiments I have as yet had it in my power to make, that the cow-pea is one of the very best, and certainly the cheapest fertilizer that we can employ in the South. By some it is looked upon as an exhausting crop, nor is it to be wondered at that it should be so. Land that is tolerably poor is of preterence selected, as there the pea goes less to vine, and pods more abundantly; and just before frost, the entire plant, root and all, is pulled up and cured for fodder! I was forced to do this once, but will not try it again. Even then, however, the land was somewhat improved, as the leaves had all dropped before I felt forced to skin so deeply, by the prospect of being short of fodder, and the ground was so effectually shaded all summer.

I will now suggest some experiments, which, if I live another year or two, I shall try. I am unfortunately situated like too many of my brother planters, and have little leisure for anything but cotton-making. Where a planter aims at producing, to as great a certainty as possible, as much cotton as his hands can pick, up to Christmas day, he has no time for other occupation. If we could be satisfied with as much as could be saved before the 1st December, something could be done in the way of improvement. The making of sufficient manure for a large plantation, and hauling it out when made, seem heavy tasks, and they are so. Yet it would certainly be just as easy to make and apply three times as much manure on a plantation working thirty hands, with of course teams in proportion, as on one of ten hands. The waste of valuable manure on plantations is very great, and it will be many years before much improvement is effected.

I propose to select ten acres of poor land, which I will have well plowed, and as early as 1st to 15th March planted in cow-peas sufficiently close to give a good and early covering to the ground. Peas planted early produce more vine and fewer seed than when planted late. So soon as they begin to blossom freely, I shall have them turned completely under, and another crop of peas immediately planted. The second crop I intend shall stand to ripen, when I will turn hogs upon them, but no cattle, so that the leaves and vines will be almost all returned to the soil. One half of the lot I will have turned over deeply in the fall, the other half in the spring, planting one half of each five acres in cotton, and the other half in corn. It was my intention to experiment in this way this season, but circumstances render it impossible to any extent. That such a course will do more for our land here than the turning under of a crop of clover will in the north, is obvious. The quantity of vegetable matter on the ground, other things being equal, is vastly greater—I should say some three fold; the roots are few, one long tap-root only, with a few slight fibres; the vines and leaves large and extremely succulent, completely shading and protecting the soil from the sun; and the plant is of but a very few weeks growth. The cow-pea requires little or no culture, which is in favor of its value for this purpose—a bull-tongue plow run along each side of the row will suffice, though even this may be dispensed with. I would not wish to have it thought that I am advancing what I suppose to be a new idea, in advocating the value of this plant for this purpose. It has already been *discussed* in all its bearings, but has been *but little tried*. My object is to induce a few such trials as that I have proposed. If our agricultural societies would give prizes for the best conducted and most successful experiments of the kind, they would do infinitely more good than by the course they at present pursue.

As a fodder-making crop, the cow-pea is invaluable. It is, like clover, difficult to save, but when saved, of greater value. This I have tested. I had a plan for gathering and saving pea-fodder, suggested to me the other day, that is well suited to the cotton plantation, and which I shall practice when the vines are sufficiently matured, and plentifully covered with their long, well-filled pods; namely, run a heavy, iron-toothed, two-horse harrow over them, and as the harrow becomes loaded with vines, lift it up and pass on. By this means, the vines are rapidly gathered into piles, with a little dirt perhaps among them, which will shake out in curing. They are then put up in rail pens in the usual way. You must bear in mind, when you see such a mode recommended for harvesting a crop, that to *cradle* the cow-pea is impossible; to cut them with scythe or sickle, a slow, troublesome business; and that the most convenient and common practice is to pull them up, root and all, by hand. Their growth resembles that of none of your northern peas, but is rather that of a gigantic clover, with vines of any length under say 8 to 15 feet. The pods are very numerous, generally in pairs, and contain each some 15 to 25 peas, which afford most excellent and nutritious food for man and beast. One of the most extensive and experienced planters in the adjoining county of Jefferson, killed upward of 700 head of hogs for the supply of his own family, (and had not enough then,) which were fattened entirely in the pea-fields.

Peach and Fig Orchard.—I have just completed the planting of a small peach and fig orchard here, embracing 350 trees of the former, and 50 of the latter; and three hands, besides what assistance I gave myself, have been busily occupied three days in doing it; two more following up and giving each tree a couple of buckets of water. I would certainly prefer that they had been planted last fall, but it rained so incessantly, that it was impracticable. The peach-trees are one year's growth from the kernel, and will be budded where they stand this summer. I would rather have had the kernel dropped where the trees now stand; but that, too, was impracticable. I shall cultivate the ground this season in Irish potatoes and early corn, both followed by peas and sweet potatoes; some of it will be in pindars, and some poor spots in peas, to be turned under green, followed by peas again, turned under. Each tree shall receive, during the summer, a good barrowful of pure marl, placed immediately around it.

The Yellows.—From what I see in various papers, the disease called yellows is rapidly spreading among the peach-trees all around you. Opinions as to its nature and origin seem various enough, but I see no plausible method of cure or prevention. From what I have seen of it, I have no doubt of its being a disease *sui generis*, and if occasinned by an insect, certainly not by the *Ægeria Exitiosa*. So far as I can learn, the yellows is altogether or nearly unknown here, while the ægeria is sufficiently troublesome. The peach-tree dies, with us, only of old age and neglect. Such extravagant crops I have never seen anywhere—so heavy that the trees are seriously injured thereby. This is the worst kind of neglect. The fruit, when so very numerous, should be thinned out when as large as pigeon's eggs, both to improve the quality and to favor the tree. You will find a short article on "the causes of decay in peach-trees, and their prevention," in a little almanac I prepared in 1842, which contains the results of my experience and observation on this subject.*

Some one suggested at a recent meeting of your excellent New York Farmer's Club, that young trees produced from Mexican peach-stones, were free from yellows. I have no doubt that those from this part of the country would be equally so; and if it would be any object to some of your friends, sufferers from this disease, (and subscribers to at least two agricultural papers—you know my rule!) to try whether or no, I should take pleasure in saving some pits for them this summer, as we have so far this season, the prospect of a full crop of every kind of fruit, which, however, *might be* blasted by a late frost. Peach, plum, pear, and fig-trees, are all in full bloom, and have been for two weeks past. It is rare, indeed, that our peach-trees *repudiate the debt* they owe the careful cultivator; so that even your fastidious New Yorkers need not mistrust them, though they do come from Mississippi!

Migration of Birds.—They must have had a moderate, open winter north, and northwest of us, to what they had during that of '42 and '43, if we may judge from the movements or migration of the birds, a subject which is deserving of more notice from farmers, and of record in farming papers, than it receives. During the winter preceding this, the open commons, pastures, and cotton-fields, were frequented, for several weeks, by large flocks of a plover, which I am inclined to think is the golden-plover, (*charadrius pluvialis* of Wilson,) though differing slightly in its markings and size. They afford capital eating, as I proved to the extent of sundry dozens. The same birds are to be found in vast numbers on the prairies of Illinois, during an open winter or early spring, and I presume were driven thus far South by the severity of that season there. The robin (*T. Migratorius*) and the cedar-bird (*Ampelis Americana*) were also unusally numerous. This past winter, neither robins nor plovers have been seen, and but very few cedar-birds. The sand-hill crane is also but poorly represented this season.

Thomas Affleck.

Ingleside, Adams Co., Miss., March 5, 1844.

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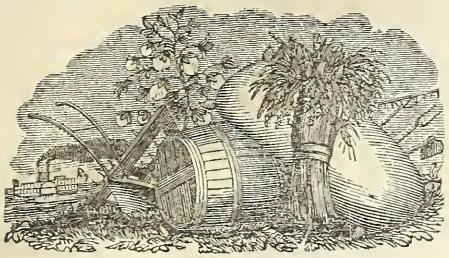
*Note.—From the date of this letter, our readers will see, that Mr. Affleck, when he wrote, could not have yet seen the able article on the Peach-Tree, by S. S., which appeared in our February and March numbers for this volume. In that, the yellows is attributed to the aphides or plant-lice.—Ed.



WEDNESDAY, JUNE 12, 1844.

☞The absence of the editor for some days, and other pressing engagements, must be our apology for the usual editorial comments, notices, &c.

GREAT CROPS.—Gov. Hill states, in the Monthly Visitor, that there were raised last year, on an island in Winnipisseogee lake, 66½ bushels of fine spring wheat to the acre—the same land having given, the year before, 137 bushels of shelled corn. The farmers of that region, we should suppose, can have no great desire to emigrate West.

WORMS ON CABBAGE.---These pests of the garden may be destroyed by taking off one of the large lower leaves of the cabbage, about sundown, and laying it on the top of the plant, "backside down." Take it off early in the morning, and the whole or a large part of the worms of that cabbage will be on it, and may be destroyed at pleasure. So says W. Chandler, in the Tennessee Agriculturist.

☞Immediately after a cold night, or when frost is discovered on plants, have them well watered with spring or pump water. The watering must be done before sunrise, otherwise the plants will suffer or be entirely destroyed.

HARVEST DRINK.---To 10 gallons of water add half a gallon of molassess, a quart of vinegar, and 4 oz. of ginger. Let the water be fresh from the spring or well, stir the whole well together, and you will have a most refreshing harvest beverage.

SALTING HORSES.

A curious fact is mentioned in Parker's Treatise on Salt:

"A person who kept sixteen farming horses, made the following experiment with seven of them which had been accustomed to eat salt with their food: lumps of rock salt were laid in their mangers, and these lumps, previously weighed, were examined weekly to ascertain what quantity had been consumed, and it was repeatedly found that, whenever these horses were fed on hay and corn, they consumed only about two and a half or three ounces per day, but that when they were fed with new hay, they took six ounces per day."

This should convince us of the expedience of permitting our cattle the free use of salt at all times; and it cannot be given in so convenient a form as rock salt, it being much more palatable than the other in a refined state, and by far cheaper. A good lump should always be kept in a box, by the side of the animal, without fear that it will ever be taken in excess.

☞Take the agricultural paper *published in our own State.* A good pig will pay for it.

ACRICULTURAL MEETING.

MONROE, GA., June 4th, 1844.

At a meeting of a portion of the citizens of Walton county, this day held in the court house, for the purpose of forming an Agricultural Society, John Scott was called to the Chair, and G. T. Symmes requested to act as Secretary.

After a short explanation of the organization of such Society, by Williams Rutherford, Jr., and Col. C. D. Davis, on motion of Mr. Rutherford, the constitution of the Hancock Club was read, and unanimously adopted. After which the following gentlemen were chosen officers of said Club, viz:

Williams Rutherford, Jr., President.
John Scott, 1st Vice "
Thos. W. Craven, 2d Vice "
John P. Snow, 3d " "
G. T. Symmes, Recording Sec'y.
Jas. Jackson, Correspond'g "
G. W. H. Murrell, Treasurer.

On motion, the proceedings were requested to be sent to the Editors of the Southern Cultivator for publication.

JOHN SCOTT, Chairman.
G. T. SYMMES, Recording Sec'y.

For the Southern Cultivator.

MESSRS. EDITORS:—As a reader of your paper, suffer me to make some inquiries of you, or some of your well-informed correspondents:

1st. What preparation of the soil is necessary, the time when, and the quantity of seed to be sown per acre, of orchard grass and clover respectively? In regard to the latter, I believe it is usual, or at least frequent, to sow with oats or other small grain. This, I suppose, is to protect it from the sun. If this is done, are the clover and oats to be sown together? I think it has been recommended to blend several, or at least two kinds of seeds together—which are preferable?

2d. In regard to grass for yards, lawns, &c.: which is most preferable where it is not to be cropped, and when to be sown? Should the seeds be ploughed in, or the ground previously broken up, and then harrowed in? Would it be best to manure upon a soil a little rolling, rather poor and somewhat stony? (I mean for the yard.)

3d. I have seen charcoal recommended as a manure for wheat, and I believe it is generally advised to apply manure for this grain to the previous crop. Can this be done in this instance, or may it not be applied at the time of sowing? In my section of country, it is usually (if not universally) the practice to sow wheat on ground which has just grown a crop of corn. How and when shall the ground, under these circumstances, be manured?

4th. Nearly all the northern agricultural papers speak of and recommend plaster, (gypsum I suppose) for various applications. What is this substance? Where does it exist; and, in its absence, what shall supply its place? It would seem to be a very common article at the north, but I am not aware of its existence in this section of the country. Does not lime constitute its basis?

My communication will not add to the *information* of yourselves, Messrs. Editors, nor of your readers; yet, *an answer* to the several questions proposed, may relieve some other agricultural novice beside myself, and hence oblige him as well as yours, truly, M. H. S.

Halifax Co., N. C., May 27th.

☞We hope some of our correspondents who have made the necessary experiments in these matters, will respond to the enquiries of M. H. S.—ED. CULT.

From the Southern Planter.

EMIGRATION.

We make the following extract from a letter from Dr. Philips, Editor of the South-Western Farmer, Mississippi, to his brother Editor of the American Agriculturist. We do not hesitate in expressing the opinion, that this estimate of the disadvantages of emigration, is in accordance with the experience of nine-tenths of the emigrants to other States: the most of whom have sought, in a change of habitation, a relief from difficulties, which they were too loath to ascribe to the effects of an ill-regulated life:

"PLEASURES AND ADVANTAGES OF REMAINING AT HOME.—Let any man 'cypher' up the cost of moving—the cost of land—the cost of building—the cost of clearing—to say nothing of the deprivations in a country where farms are to open—the loss of dear associates—our school-mates—and the time required to prepare for making money, and I venture on it, no sane man will move. I want to see many from those old countries here: not that, Indian-like, I wish them to suffer because I have, but that I want a thicker-settled country, and more demand for land. Yet with all this, I would recommend them to improve at home where they now are; husband their resources; study the economy of manures, improved agricultural implements, stock, seeds, the best rotation, and management of crops.

"Would that man merit aught but opprobrium, who would urge his fellows to sever every tender tie that binds him to 'Home, sweet home;' to even the 'old oaken bucket;' to the soil; to his associates and relatives, for the purpose of getting richer land, which, when cleared, and cultivated as is now done, will cause the young flock to wander again—and in reality, only serve to support one generation? I say nay, and therefore urge it on our brother farmer C. McD., as on all others in that good old State, to make it a part of their regular business to save, gather and make manure; they will find that three years of labor, with the cost and loss of moving, will give them such lands, that they will cling to the 'old South State,' even if they live in the 'Pedee country—God bless you.'"

☞The humble man is like a good tree—the fuller of fruit the branches are, the lower they bend.

☞Farmers, look well to your crops—let not the grass and weeds flourish, while your corn crops are diminishing.

☞I O U are the vowels which create more disagreeable sensations in the minds of honest men, than all the rest of the alphabet put together.

☞An honest farmer might as well expect to draw blood from a turnep, as to seek happiness at home or elsewhere, while *in debt* to a large amount.

From the Albany Cultivator.

IMPROVEMENT OF FARM STOCK.

Messrs. Editors—The improvement of farm stock can hardly be too frequently brought before the mind of the agriculturist, and of all who feel any interest in the prosperity of the country. No individual of any observation, whose attention has been drawn to this subject, and who has had an opportunity of critically examining the quality and character of the stock reared by a vast majority of farmers, can fail to be forcibly impressed with its importance to the nation, as a permanent, certain, and reliable means of largely increasing the aggregate wealth and resources of the whole country.

It is believed that this subject may appropriately engage the attention of the merchant, the manufacturer, the statesman and the patriot, as well as the farmer, when it is considered that agriculture is the foundation and the main source of national wealth, as it puts in motion, and imparts life and energy to all other branches of national industry. Let the agricultural products of the country fail for a single year, and what effect would it produce on all other interests? The ships of the merchant would be found moored and decaying at his wharf; the manufactories would cease to operate; our noble canals would then indeed become a "*solitary wilderness,*" and every branch of industry would become paralyzed.

If, then, such vast interests are so intimately connected with a well-regulated, intelligent and prosperous husbandry, it may well be inquired whether improvement in farm stock, which is one of the principal items of the farmer's wealth, is not important, and intimately connected with the general interests and prosperity of the country? More particularly is it so to the farmer, and improvement must principally depend on his well-directed and persevering exertions. Each farmer should put the question directly to himself—"Have I in my possession neat cattle which possess the greatest combination of excellence, which are the most profitable for the dairy, which will mature early, and when no longer wanted for dairy purposes, will put on flesh with the least expense in feeding for the butcher? Have I the best sheep for fleece and carcass—the best breed of swine, those of quick growth and approved fattening qualities?" And if, on investigation, he becomes satisfied he is deficient in one or all of this description of animals, his own interest should at once stimulate him to spare no pains to procure such, no matter if it be at extra-exertion, and a reasonable additional expense; for what is an outlay of a few hundred dollars compared with the accumulated profits one may reasonably expect to derive in the period of a few years. Besides, there are other considerations of great interest that should not be lost sight of. It is well known that a great proportion of the labor and expense of the farmer is bestowed upon his grain and root crops; and when those are well secured, it becomes a matter of interest to decide how they shall be disposed of to the most profit. Perhaps a great proportion of farmers decide on feeding them to their stock to fatten them for their own consumption and for the butcher. If stock can be raised, which will consume one-third or one-quarter less food than the ordinary or unimproved stock of the country, how important is it he should rear such stock?

This is no ordinary subject; and there can scarcely be any just reason why it should not as deeply interest the agriculturists and arouse them to action, as does the improvement of our home fabrics interest and engage the attention, zeal and persevering energies of the manufacturers. Why do those who are engaged in this branch of industry devote so much time and means in perfecting labor-saving machines? Why so much solicitude in regard to a discriminating protective tariff, and why do they invoke the aid and influence of the agriculturist, whenever there is a proposition to modify the tariff in the slightest degree, and why is an appeal made to sustain this interest through pamphlets, handbills, and in the columns of almost every newspaper in the country, calling upon all classes to sustain this interest? It is simply because they have the discernment to see that their interests are involved in this question, and that their prosperity is in jeopardy. This is a right spirit, when so restrained and directed as not to infringe upon or injure other equally important interests. Now, until something like the same spirit which so extensively pervades the minds of those who are engaged in manufacturing, is infused into the minds of the practical agriculturists, improvement in farm stock will be of slow growth, and no permanent beneficial results can reasonably be expected. The agriculturists of England understood well their true interests in this branch of husbandry, and they have extensively encouraged the breeding of superior stock, and for the last fifty years or more, have, by unwearied attention and perseverance, brought up their stock to a point of perfection which is unrivalled by that of any other country, and which has largely contributed to swell the wealth of that nation. This improvement has increased their commerce; their stock has attracted the attention of other countries, and exportations to a considerable extent are annually made, and at high prices. The writer of this article recently wrote to a distinguished breeder of England to be informed what he would charge for one of his best Durham heifers to be shipped this spring, and he replied that his price for one about two years old, would be two hundred, and for another one about three years old, would be three hundred guineas. This fact is stated merely to show the value they put upon improved stock.

There have been imported into this country a variety of the very best improved breeds of animals from England, at considerable risk and expense, to propagate and to improve our native stock. Thus a foundation has been laid, which, if duly appreciated by those most deeply interested, very favorable results may justly be expected. Who has attended our State and County Fairs for three years past, and has not had his admiration excited by the fine display of the noble Durhams, Herefords and Devon cattle, as well as the fine sheep and swine which have graced their exhibitions and done so much honor to their owners. This stock has justly elicited the approval of the several viewing committees appointed as judges, and they have very properly awarded them the highest premiums of the several societies; and it is exceedingly to be regretted that the matter should rest here. If the owners of those improved breeds of animals should have one or more which they could dispose of, to those whose interest it is to purchase them, if any offer is made for them it would hardly be sufficient to pay the freight on a single animal across the Atlantic. Is this a right spirit? Will such apathy and disregard of interest, on a subject which is so intimately connected with the great agricultural interests, promote improvement, or will it not produce a decidedly contrary effect, and discourage those who now take an interest in the subject, and who are willing to devote some time and their resources, to carry forward improvement? It is to be hoped that a better spirit will soon prevail, and that that attention will be given to the subject, which, from its importance, it is justly entitled to. The Fair of the New York State Agricultural Society is to be held at Poughkeepsie in September. The location selected for it is a good one, and affords great facilities for transporting stock. The premiums offered on stock are of sufficient magnitude to induce owners of good stock to exhibit it, and doubtless there will be a display of fine improved animals which will far surpass that of any other exhibition which has ever occurred in this country. The concourse of people which will there assemble, will doubtless be very great, not only from this but from other States, and if a right spirit is evinced by those whose interest it is to possess good stock, a new impulse will be given to this branch of husbandry which may, in a few years, produce great improvement, and eventually raise the quality of our stock to a point of perfection equal to that of England. These thoughts are thrown out in the hope that the subject may engage the attention of others previous to the Fair in September. C.

Rensselær County, April 25, 1844.

Sheep in the British Isles.—These exceed thirty millions in number, which is ten millions more than we have in the United States; and yet how small their territory compared with ours.

CONTENTS OF THIS NUMBER.

Dana's Prize Essay on Manures,.....89
Industry,.....90
Of the average quantity of Butter yielded by Milk and Cream, and of the yearly produce of a Cow,.....90
Close Planting of Corn,.....91
Improvement of Clay Soils,.....91
The Physical Education of Woman,.....92
Whitewash and Paint—Brilliant Whitewash,.....92
Small Farms,.....93
Cattle Distemper,.....93
Green and Dry Wood,.....93
Things that I have seen,.....93
Clover, Herds-grass and Timothy,.....93
The Cow-Pea, Peach, &c.,.....94
Editorials, &c.,.....95
Salting Horses,.....95
Agricultural Meeting,.....95
Emigration,.....95
Improvement of Farm Stock,.....96

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☞ *All subscriptions to commence with the volume.*

SOUTHERN CULTIVATOR.

VOL. II. AUGUSTA, GA., JUNE 26, 1844. No. 13.

Communications.

For the Southern Cultivator.

MR. EDITOR—By referring to the last number of the Columbia (S.C.) Carolinian, you will perceive that the subject of overseers is undergoing an able and thorough discussion. No question connected with Southern Agriculture is more interesting in a pecuniary view, nor more important to the rapid improvement of the science: and, singular as it may appear, it is true, that, in the astonishing progress which has been made of recent years, in the analysis and adaptation of manures, in the mode of ameliorating lands, and of cultivating the staples, little or nothing has been said or done, in relation to the practical operator, in the application of these changes.

The general practice, heretofore, has been to select an overseer, with regard, simply, to experience of planting, and to sobriety: and, considering the frequent and often long-continued absence of the employer, the entire control of the business, which it has been usual to intrust to the agent, and the universal custom of looking only to the result of the crop as the sole test of good management, these qualities, superadded to industry and energy, would perhaps have been enough. Relying fully upon the judgment and experience of the overseer, this functionary is permitted to direct the mode of preparing and manuring the land, the period and manner of planting, the extent of tasks, with the inequalities in them, applicable to difference of sex and age, of health and strength of the laborers, and the vital part of cultivating the crop. Thus, master of his own actions, and responsible really to no one, he rides over the fields, and inspects the work and the stock, at his option; experiments with implements and with soils at pleasure, and always fruitlessly, since he is unaided by the knowledge of any scientific principle; and, knowing that neither his situation nor his reputation will be compromised while his crop can compare with those of his neighbors, the better paid of them, sometimes indolently visits his charge in a carriage,* and often keeps his dogs and his boat, and indulges in the agreeable pastimes of the chase and the rod. Happy lot is that of overseer—for a man without education generally, and born to labor. He is well paid for playing the luxurious part of gentleman, and possesses, for the time, the plantation in his care, with all its means of contributing to his comfort and pleasure.

But a revolution is at hand. The system is not to be modified, but to be reversed. Planters, thus far,—at least, it is generally so with us—have enjoyed the bounties of virgin soil, of large products from them, almost spontaneously, and of fair prices. Receiving a liberal return from their investments, and from trifling labor in cultivation, and living in a country where the standard of wealth is low, and the means of subsistence abundant and cheap, and extravagant luxuries are almost unknown, they have been able to give good wages to their employees, and furnish them with every requisite comfort,—and beeninduced, by their easy independence, to exact little from them, beyond a loose attendance on their places, and to pay little attention themselves to their own affairs, further than to pocket the proceeds of the crop, and replenish the plantation deficiencies. The times, however, have now changed. Our lands are becoming worn, and it will be necessary to supply them periodically, with those essential ingredients that are periodically abstracted. They must be properly fallowed and rotated, and judiciously and carefully tilled. Our negroes, if possible, must be more gently worked. Amid the multiplying blessings of civilization, and the vastly improved system of agriculture we are striving to introduce, it is our duty to convey some of their ameliorating effects to the operative. Competition in the product of our great staple is increasing, too: the growth of it is extending in India,—and, from late accounts. they mean not only to surpass, in quality, our Orleans and Mobile Cotton, our Georgia's and Santee's, but to rival also our long staple. Should Texas be immediately annexed, it will open a wide field for its cultivation; and, from the vast extent of its fertile and inexhaustible soil, and its benificent clime, will probably one day monopolize its culture. And, if the Union is deferred, it will only defer our doom as *extensive* cotton growers. Our Southwestern brethren are investing more largely each year, in its production, and with superior advantages of climate and soil. It is enough to cite these, without alluding to less enterprising and less favored competitors, like the Brazils and the Eastern Islands.

And what is more alarming still, is the fact, that production is at last outstripping consumption. In 1834, we produced little over a million of bags: in 1844, with the continuance of a good season, we cannot calculate on less than three millions, while the markets of the world are glutted beyond example, and the raw material about as low-priced as it has ever been, with the prospect of sinking still lower; and this, too, under a crop of only two millions of bags. The hopes entertained of the Chinese market, are all fallacious. No great benefit could accrue to us immediately, from the opening of all their ports. They are too poor to buy: they are almost as destitute as the Irish: they have mainly their great staple of tea to exchange, and the consumption of it is insignificant, compared with what it should be, to aid us materially in the disposal of our cotton. If a prohibitory tariff were imposed upon coffee, and tea were to become the universal beverage, it would not vary the result to the required point. The theory so fondly cherished by many, that the increase of negroes will not be in proportion to the increase of consumption—that increased production is dependent upon the increased force to create it, and that ere long consumption must exceed it by a large proportion, is equally ideal. There are nearly three millions of negroes in the Southern States: nearly two millions of them are workers. Concentrate these, as ere long under valuable returns and active competition they would be, in the best cotton growing region. Suppose a yield of 2500 lbs. neat cotton, or 5 bags to the hand, and you will have nearly ten millions of bags. These negroes, if well fed and clothed, and not overtasked, (and the mass of them are so treated, and their condition in these respects is yearly improving,) it is asserted, by a late writer, will double their numbers in 25 years. The crop, at the end of that period, (without considering the changes to be made, in the meantime, in the system of planting, and which may increase largely the product to the hand,) would be nearly 20 millions of bags, or 10,000 millions pounds, and enough to clothe the whole human family, even if it should double itself likewise; which, of course, it is far from doing, or ever having done, in that period. The notion is fanciful, and can only be indulged by those who are neither calculating nor practical.

No, we must abandon the well-spun theories, which are seducing us into dreams of prosperity and security; and yield at once to the conviction, that it is necessary to accommodate ourselves to our new circumstances. We must be prepared to meet the crisis when it comes. We must begin at once the practice of frugality and economy. We must combine farming with planting; produce all that is practicable at home, and no longer permit ourselves to be furnished with any of the means of support or of labor from beyond the mountains. But, first of all, we must turn our undivided attention to our own business; study fully the theory of our pursuit, and practically apply its principles. We must test the discoveries and improvements that are constantly being made; and, by original experiments, add to the knowledge of the country. And, to do all this effectually, we must be aided by industrious, energetic and intelligent overseers. This important and indispensable class must be improved. Their arrogant ideas of exemption from work, of optional inspections, of independent action and irresponsible power, must be eradicated. The only mode of accomplishing this, (and it must be done first or last,) is by learning thoroughly ourselves, and imparting our knowledge practically to them; by directing, in detail, all our planting operations; by frequent and minute inspections of work, implements, stock and laborers; and by enforcing prompt obedience to every order, and rigid accountability in the discharge of every duty, and in the observance of every precept of plantation economy. It is erroneous to suppose that planting is an easy and indolent vocation. Properly pursued, it is one of the most arduous; demanding untiring activity and energy to regulate the negroes, divide and task them judiciously, designate work, mode of doing it, and to observe from day to day that it is correctly done; attend to stock; the manure pit; the experiments going on; with many other matters depending on the variety of his collateral works. And exacting constant mental exertion to acquire a knowledge of all the physical sciences, so indispensable to enlightened and successful planting, and to keep pace with the improvements in the country; and a cultivated judgment, to investigate the thousand theories that are broached, to experiment, to compare facts, to combine and to apply them. And while the overseer may be exempted from very much of the mental labor of the owner, his physical activity should be increased; his time, his efforts, and his thoughts, should be devoted to the welfare of his employer, and he should take the deepest interest in every operation tending to promote it.

But my remarks are extending too far. I intend them as introductory to the request, that you will publish the articles on overseers, signed Franklin: coming, as stated, from a scientific and successful planter, they will carry a weight additional to their intrinsic merits.

A BURKE PLANTER.

* A fact: one instance has certainly come to the knowledge of the writer.

For the Southern Cultivator.

WORN OUT LANDS, SCOOTER AND SHOVEL PLOWS, &c.

Mr. Editor—The worn-out condition of the lands in Georgia, has become a matter of regret to every patriot in the State. To retain the present population, and prevent their emigration; to restore the lands in the State to their original fertility, and even greater productiveness, should be the earnest wish and constant endeavor of her citizens, statesmen and legislators. The Legislature should assist in the great work, by offering premiums for the best improved farms, crops, plows, &c. More than three-fourths of the taxes are raised from the farmers. Can any one object to a few thousand dollars being restored to them in that way? Any assistance in arresting the evil, and restoring the worn-out fields to fertility, will be doing "the State some service."—So, Mr. Editor, if you will print what a plowman writes, you shall have my help.

The destruction of lands at the South, is owing partly to their rolling nature; partly to the heat of the sun; partly to treading by stock; and mostly from imperfect cultivation: which includes want of rotation, want of manure, overcropping, and improper implements of tillage. A few remarks on the last subdivision, as connected with plowing and plows, will, it is hoped, meet the approbation of my fellow plowmen.

Generally, the deeper the ground is broke by the plow, the better for the crop, (except deep sand with a light vegetable mould on top.) If more labor and attention were bestowed on the preparation of land for planting, less labor would be required in cultivation, and the production would be increased. Land, to be well plowed, should be broke at the bottom of the furrow as well as at the top. A plow, to break the ground well, should have a *broad point;* or, if a winged plow, the lower part of the wing should be as nearly horizontal with the point of the plow as practicable to work well, so that it may *cut the dirt loose at the bottom of the furrow.*

Spade culture is considered the most perfect; consequently a plow (in plowing) that approximates nearest to spade work, must be the best plow. The scooter and shovel plows (used almost universally in Georgia) are triangular, forming acute angles at the points, and their work does not imitate, in the least, work done by the spade;* therefore, they are imperfect plows, and cannot do good work in breaking the ground. The *scooter and shovel plows have done more injury to the lands in Georgia, than every thing else;* because the ground is broken so shallow by them, that it is washed off by the rains. They cut a sharp trench into the ground, and leave an unbroken ridge on each side of the furrow. They cannot thoroughly break and pulverize the ground; and in plowing over the second time, they will follow in the furrow made at the first plowing.

Now, Mr. Editor, I have condemned seven-eighths of the whole number of plows in Georgia, comprising scooters and shovels, and I might leave the owners of them where I have found them; but, as I am fond of good plowing and plowers, I will tell them what other plows to use. Besides the improved northern plows, which you can see described in the Cultivator, some of our blacksmiths make plows that are far superior to the scooter and shovel.

Among them, is the scooter dagon, a turning, one horse plow, adapted to light soils; the "*nullifier*," a broad-pointed plow, commonly made to turn the soil half over—can be made to turn it entirely over—adapted to all soils, excellent for breaking stiff stubble land, cutting deep-rooted vines and briars, bedding cotton ground, potatoes, &c., an excellent plow; the coulter, winged coulter, twisted shovel, &c., all of which can be used on the common plow stocks, except the coulter and winged coulter, which require coulter stocks. I know some farmers who have thrown aside the scooter and shovel altogether. They may do for some kind of work, but they are not like patent pills, they won't answer for all complaints.

In traveling through the country, I have often stopped at the smith-shops, and examined the plows. In many shops, the scooter and shovel are the only plows made, except a few sweeps. The farms around such shops are generally badly worn, and the crops poor. In a few shops, wherever I have found an improved variety of plows, the improvement was apparent in the appearance of the fields, and in the growing crops. And where manure was added, the crops were still better.

If the above remarks and facts should save even our small fields from utter desolation, or put one dollar more into the pocket of a brother farmer, it will be very gratifying to a

Plowman.

Butts Co., May 28th, 1844.

"I don't mean that any person ever plowed with a spade, but used it with the hands.

For the Southern Cultivator.

A LEAF FROM THE BOOK OF EXPERIENCE.

HILL SIDE DITCHING, MANURING, ETC.

Mr. Editor—I have been many years a farmer, and for several years past have manured much of my corn in the hill, and some of my cotton. I have acquired some little notoriety among my neighbors, for saving and applying manure; have cleaned out my stables, scraped my horse-lot and barn-yard, and all the manure not needed on my garden has been given to my fields. Surplus cotton seed, too, has not been wasted; yet, in spite of this stercoraceous *profusion*, I have had to look, with rueful face, upon annually decreasing crops and half-filled cribs. I will say nothing of cotton, for I cannot say anything that would be very flattering to my variety, or interesting to the public, either in regard to mode of culture or large production. But I am a man of corn—formerly enjoyed the enviable distinction and title of "corn-seller," and am yet no corn-buyer; but if a turning point is not soon found, I may be reduced to that necessity. I farmed it, in this down-hill fashion, for 15 years—perhaps more; I'll not stop to calculate. Now what have I got by it, and what have I done? Why, I have a house full of children to feed and educate; but, as I did not gather them from the fields, I will drop them from the narrative! Next, I have got an exhausted farm—fields gullied by rain, and a face furrowed by time; the latter being inevitable, I can bear it with becoming resignation; but the former being avoidable, I cannot contemplate it with so much composure.

Now these things have not come upon me like the Texas treaty, without premonition, but gradually, like my children to the table—one every year or two. Seeing the evil of impoverished land, I attempted to avoid it, and for this purpose sought information. Years ago, I read attentively the Albany Cultivator, a good paper in its latitude, but most of its matter about as interesting to a *Southern* farmer as a lecture on the best mode of cultivating Chinese tea would be. Next, I took the Farmer's Register, and then the Southern Planter. These contained too much tobacco, not for my teeth, but for my habits—agricultural habits, I mean. Suffice it to say, I derived but little benefit from either, or all of them. They led me to one thing, however, which, though immediately injurious, may prove remotely beneficial, to wit; whirling my land top-sy-turvy with a turning plow. This may do for rich land and deep soil, but will never do for cow-hide land.

Perhaps, Mr. Editor, in all your geological researches, you have not found out what "cow-hide land" is. If so, I felicitate myself in being able to add to your stock of knowledge. It is land which has soil about as thick over the clay as the hide on an ox. By deep plowing, therefore, a quantity of litter, vegetable matter, was turned under, but too much clay was turned up; the soil was weakened, to be sure; the elements of vegetable nutrition are there, but the roots can hardly find them, or if found, can hardly be extracted by the clay-clamped roots in a dry time. This is the present injury; and the remote benefit is, I have got the soil where the rain can't wash it all away at once, and I will get the good of it after a while.

Manuring and turning over, however, is not all I have done to improve and save my land. Some has been laid off on the horizontal plan; and upon the whole, the level has done some good. Indeed, the plan is very good in moderate rains; but when the bottom drops out of the clouds, and deluges come, there must be some way provided for the water to pass out of the field, or it will make itself one. So you may perceive I have some experience, and have tried various expedients; yet the tendency is still downward.

My next periodical reading on the subject of agriculture, is in the "Southern Cultivator." I say nothing of its merits or demerits; the one might offend editorial modesty, and the other be unjust. It is sufficient for my present purpose to remark, that I found in it instructive essays on hill-side ditching. These I read and thoroughly considered in all their details, and so far approved as to determine to adopt the plan, with some little modification. Accordingly, I *reconnoitered* a field, and armed with the proper implement I invaded it, laid off the ditches, plowed up, and excavated them *secundum artem.* But I made an awful mistake. Your practical and excellent correspondent, Farrer, said—give a fall of two inches to ten feet. Says I, that won't do, the remedy is as bad as the disease; every ditch will become a hideous gully; I'll make an improvement, by giving only two inches to the rod; and I adapted my works to my faith, at least in some of my fields. Luckily, rain came seldom, and light when it did come. The ditches performed their duty finely, because that duty was easy. But a chance came—not of the moon, but of the weather. "The heavens thundered, and the firmament glared with frequent lightnings"—rain descended in torrents, for hours together. Such rains do not fall every year! Many of the ditches were filled with sand, and others demolished; some gullies were formed and others deepened; and much of my land, that I had a title "to have and to hold in fee simple forever," nullified my deed, and started down the river toward Macon. Such was the result on rolling land, where the ditches had not sufficient declivity; but on other fields, where the land was more level, and on rolling lands where the size and declivity of the ditches were sufficient, no damage at all was done. The success was so perfect, that I am now satisfied, that I have found the great agricultural *panacea*, for which we have been hunting these many years. When I have seen not only the soil, but the manure that I have toiled to get on my fields, soon washed away, I have felt dispirited, and sad; and visions—day dreams—of the fruitfulness of Alabama, Mississippi, and *even* Texas, infested my mind. But the ties of nativity, friendship, kindred and comfort, have thus far bound me to the soil of my ancestry; and now the gratifying truth is discovered and established, that the fertility of our farms may be preserved or restored, and that emigration to a wilderness country with its thousand attendant ills is no longer necessary.

I am no enthusiast, Messrs. Editors. My scepticism in regard to the many plausible novelties of the day justifies the assertion. Yet I hesitate not to say, from my limited but satisfactory experience, that ditching, when seconded by other necessary means, can do wonders in the improvement of the face and fertility of our country. No observant farmer will deny or

doubt, that there is, annually, ten times as much soil and litter washed from our fields, as is taken off in the form of produce. Now, if this can be prevented, the period of fruitfulness will be lengthened out for years, even under bad husbandry. Ditching will accomplish this end—and then what manure may be put on "is there," and will there remain, increasing the productiveness, from year to year, in proportion to the kind and quantity annually used, the mode of its application, and the skillfulness of the tillage. I know that ditching "*per se*" cannot enrich land, any more than the President, "*per se*" can annex Texas. But let one be "backed" by manure, and the other by the Senate, and both objects will be accomplished; and I may add, as in a republic, rotation in office is right, so in agriculture, rotation in crops is useful.

Where is the manure to come from, to be applied to our whole farms? From every where. Decayed or decaying vegetable matter is manure, give me this matter, and the fertilizing salts (so much talked of) will be there. If you think not, add more, and no harm will be done. In addition to the places where manure is usually sought, go to the wood-yard, fence corners, pig stye, hog beds, and peradventure the mansion yard, these may all furnish some. The woods and branches furnish it largely. Look at the drifted leaves, intermixed with soil, in swamps and vallies, where they have been accumulating for ages; look at the soil in places inaccessible to the plow; look at the marsh mud—muck you call it; look at all of these, and then say if we have not the elements of prosperity at our command. And don't look only, but gather up, and have it upon your fields: and don't haul by the day or two, or week or two, but make a business of it. Start, as when with axe and mattock, the forest was invaded to clear a field or "open a farm." Next let deep furrows be made at the proper distance for planting. The deeper they are made the better. Fill them with such manure; break the balks deep with that good old-fashioned sub-soil plow, the coulter; then with good cultivation it will be seen that labor thus bestowed on old land, will yield a larger profit, than the same amount devoted to clearing.

If I live, Messrs. Editors, you shall have the result of such an experiment. Far be it from me to say any thing against well-meant or promising plans or exertions to promote the interests of agriculture. Hence I will not condemn the various new-fangleds method of making manure by humid fermentation or otherwise. Thus made, it is doubtless richer and more stimulating, but also more costly in labor and money, than manure produced by spontaneous decay, or by the agency of animals; but I will venture the opinion, that twice as much land may be equally enriched, with a given amount of labor on the plan I suggest, as can be, on the tedeous, manipulating process of Jauffret, adopted substantially by Bommer. If, however, this process is a good one, I wish it success. Of this we shall doubtless soon be informed, as some are testing its virtues by experiment. In the mean time, I shall content myself with the old-fashioned process of humid fermentation, to wit, the teeth of cattle in lieu of crowbars, and their stomachs for vats. But for such materials as they will not lend their inner organs to reduce, I assert my sovereignty, and demand the use of their heels and hoofs, in trampling them to the proper state. COLONUS.

Covington, June 15, 1844.

For the Southern Cultivator.

BEES.

MR. EDITOR—In perusing your invaluable "agricultural periodical," I occasionally see short paragraphs concerning bees. As we derive one of our greatest luxuries from them, perhaps it would not be amiss to tell how the industrious little laborers should be treated.

In the early part of the spring season, as soon as they commence flying out, the hive should be placed in a cool, shady situation. During the whole spring and summer, the hives should be raised from the bench on which they sit, at least once a week, and brushed under to remove the webs which are formed by worms that are highly destructive to bees. As soon as they cease to labor in the fall, the hive should be exposed to the cold, but kept dry. In a cold place, they soon become torpid, and of course they consume but little food; also, they are not "invited out" in the open air, where they would soon perish. In "robbing," or taking the honey from them, it should never be taken out lower than half way down the hive. It is improper to "drive" them from the hive they inhabit into another, unless the hive is defective; for, in doing so, we destroy hundreds of young bees in the embryo state. Yours, &c., UNUS.

Camp Ground, Monroe Co., June 6th, 1844.

NEW METHOD OF OBTAINING CREAM.

We extract the following from the valuable Report of the Hon. Mr. Ellsworth, Commissioner of Patents.

New Method of obtaining Cream from Milk; by G. Carter of Nottingham Lodge, near Eltham, Kent.

The process of divesting the milk of its component portion of cream, to an extent hitherto unattainable, has been effected by Mr. Carter, and is thus detailed by that gentleman in a paper presented to the Society of Arts:

A peculiar process of extracting cream from milk, by which a superior richness is produced in the cream, has long been known and practised in Devonshire; this produce of the dairies of that country being well known to every one by the name of "clotted" or "clouted" cream. As there is no peculiarity in the milk from which this fluid is extracted, it has frequently been a matter of surprise that the process has not been adopted in other parts of the kingdom. A four-sided vessel has been formed of zinc plates, twelve inches long, eight inches wide, and six inches deep, with a false bottom at one half the depth. The only communication with the lower apartment is by the lip, through which it may be filled or emptied. Having first placed at the bottom of the upper apartment a plate of perforated zinc, the area of which is equal to that of the false bottom, a gallon or any given quantity of milk is poured (immediately when drawn from the cow) into it, and must remain there at least for twelve hours. An equal quantity of boiling water must then be poured into the lower apartment through the lip. It is then permitted to stand twelve hours more, (i. e. twenty-four hours altogether;) when the cream will be found perfect, and of such consistency that the whole may be lifted off by the finger and thumb. It is, however, more effectually removed by gently raising the plate of perforated zinc from the bottom, by the ringed handles, without remixing any part of it with the milk below. With this apparatus, I have instituted a series of experiments, and, as a means of twelve successful ones, I obtained the following results:

Four gallons of milk, treated as above, produced in 24 hours, 4½ pints of clotted cream; which, after churning only 15 minutes, gave 40 ounces of butter. The increase in the cream, therefore, is 12½ per cent., and of butter upwards of 11 per cent.

The experimental farmer will instantly perceive the advantages accruing from its adoption, and probably his attention to the subject may produce greater results.

From Mr. Foy on Preserving Butter.

HARTFORD, Jan. 12, 1844.

SIR—In answer to your inquiry, What has been your practice in putting up butter, especially for preservation in hot climates, or for long voyages? I will cheerfully state that I have had considerable experience on this subject, and in some particulars, good success. There are many things required to insure good butter. The butter itself must be well made; that is, worked enough and not too much, and salted with rock salt. This being well done, and the buttermilk all expelled, the butter may be packed in good, white-oak, well seasoned casks, well filled. In cool climates larger casks can be used. In hot climates it is best to have small casks—say from 25 to 30 lbs.—so that too much need not be exposed while using. Then put these small casks into a hogshead, and fill up the same with a strong pickle that will bear an egg, and the butter may be shipped to the West Indies or Europe, and kept perfectly sweet. I have never found saltpetre or sugar of any benefit. Butter of my packing has opened as good in the West Indies as it was in Connecticut. I will remark, that to keep butter in ice-houses, when it remains frozen, will answer, if the butter is to be continued in the same temperament; but if it is exposed to warm weather, after being taken from the ice-house, it wil not keep as long as if it had not been exposed to so cold a temperature.

Yours, respectfully, G. Fox.

Hon. H. L. Ellsworth,
Commissioner of Patents.

From the Maine Farmer.

COMPOST MANURE.

A correspondent, who has just commenced farming, desires to know the "cheapest method of making compost at the shortest notice." This is a desideratum to the farmer; a question in which every one is interested, and which is intimately connected with the fertility of his soil, the abundance of his harvests, and the profit on his expenditure in money or labor, or both. An answer to the question, however, cannot be given, which will *hit* every case, because of the different location, and of the abundance or scarcity of the means, which will exist in different situations. We would advise our friends to seek out a place, if such an one can be found in his premises or neighborhood, where swamp muck can be found in abundance, and of easy access. This word, "*muck*," is a general term, and is usually applied to any deposit of vegetable matter in a moist situation. Sometimes it occurs in a state of dark, finely divided matter, which is, more properly speaking, muck. Sometimes it occurs in the form of fibrous matter, matted and interwoven together, when it is called peat. In each case it contains a large quantity of that peculiar substance which is now called humus, and which contains one of the essential elements of the food of plants. It is, however, in an insoluble state, and while in this state, that is, as long as it cannot be dissolved in the water or moisture which is in the soil, it cannot be taken up by the pores of the roots, and converted to the substance of the plant to which it is applied. The experiments of Dr. Dana, of Lowell, Mass., have proved that the best substance which can be added, in order to change this muck from an insoluble to a soluble state, is alkali. A mixture, therefore, of ashes with it, will bring about the desired change. Leached ashes will answer very well for this, but unleached ashes are better because of their containing more potash, and, of course, require a less quantity of them. The cheapest mode, therefore, of making compost, is, when muck and ashes can be easily obtained, to mix them together in suitable proportions. But our friend wishes to know the quickest mode, as well as the cheapest. Whether this dispatch and cheapness can be combined together, depends very much on circumstances. By hauling muck and ashes into our cattle yard or into the hog-sty, and letting them be there to undergo the changes which will inevitably take place during a six month's exposure to the operations which must act upon it, we get a first rate manure, at a cheap cost. If we mix the muck and the ashes together, and occasionally shovel them over so as to intimately incorporate them, we get a cheaper compost, but not so rich in the nutritive ingredients as if it had been exposed in the cattle or hog yard. The most expeditious mode of decomposing muck, straw, sods, and such like materials, will be to combine them together in a heap, or large mass, and water them occasionally, with what we call a rotten liquor, or in other words, water which is impregnated with vegetable and animal matter,

as is often found in some stagnant "puddle," or pond-hole. Several patents have been taken out in this and other countries, for peculiar modes of mixing these materials, but they cannot be very valuable to the inventors, for the operation can be so varied that the same results can be obtained without following the same course that they do.

The main object in these cases is, to bring on decomposition, and the laws of nature, when all the requirements of decomposition are at hand, will go on and produce this result without the aid of a patent right. These requisitions are—moisture, heat, and oxygen. The materials being packed together, are watered occasionally by the above named liquor, which is poured into holes made by a crow-bar into the mass, and in the course of two or three weeks the fermentation has been so complete as to reduce the whole to a soluble manure.

We will publish, ere long, Jauffret's mode of preparing manure, according to his specification of his mode, which was patented in England, as long ago as 1837. The ingenuity of the farmer will point out to him many expedients for bringing about the desired object of making compost, which the particular circumstances of his situation may require. He must bear in mind that one object is, to reduce vegetable and animal matter to a soluble state, and in a compost, materials are put together in all stages and conditions, from that which is dry and inert, to that which is already undergoing fermentation. A little experience will soon give a person an insight into the "*why and the cause.*"

From the Maidstone (Eng.) Gazette

WASTEFUL MANAGEMENT OF MANURE.

Some idea of this may be gained by analogy. Let us imagine that a farmer keeps three teams of horses, who consume, say two quarters of oats per week. Let the farmer give one quarter each week to the horses, and dispose of the other quarter as follows :—There may possibly be some ruts in the road leading to and from his farm-yard ; let him pour as many as possible of the oats into every one of the horse-holes and ruts of this road, beginning at the gate of the yard, and proceeding to the nearest turnpike-road. There may seem much trouble in all this, but nothing valuable can ever be gained or done without trouble, and this experiment will probably always be conclusive. Some farm-yards are nicely drained, and very frequently the drains run into the horse-pond. Let the farmer insist on one of his laborers (who may possibly have some prejudice against it) pouring a good drill of oats into every drain that leads out of the yard till it arrives at the pond, where he may throw in a bushel or so, and if the drain terminates, as drains sometimes do, on a hard road, let him leave a small heap of oats in every black puddle. When he shall have done this, let him cause some of the oats to be scattered in every direction round his stable, and take every possible precaution so that the birds of the air, the mice and rats of the field, the fishes of the ponds, and the creeping things of the earth, may come in for a share of the oats. The farmer's neighbors may call him mad, but let him not mind this. Ulysses was formerly called mad for sowing salt, but now many people sow salt who are considered sensible, and even clever.

Let the enterprising improver keep perseveringly on with this practice for—say three weeks. On or about this period, the ribs of each of his three teams, when in single harness, will probably form a very respectable representation of a park paling. At this point it is time to pause, and seriously ask himself the question, whether it is wise for a man actually to facilitate the waste and destruction of produce which it has cost him much money to gain, and the economical management of which will produce more money. That which we have imagined it possible for a farmer to do with his horse-food, is not a whit more unwise than the practice of some slovenly farmers with respect to their manures. What oats are to his horses,—manure, and especially the liquid and gaseous portions of manure, are to his fields. Every atom of earth which comes into contact with his dung, preserves for it some of its fertilizing virtues, yet he accumulates it in unpaved yards. Every breath of air that passes over it becomes the vehicle for carrying the volatile gases, in which plants delight, from the farmer's dung-yard to everybody else's field; yet he keeps it for a year uncovered with mould. Every drop of rain which falls from the heavens, dissolves some of its most valuable portions, and conveys it away to loss; yet the good man never dreams of sinking a tank, in order to preserve a substance—every pound of which, Liebig tells us, will suffice to grow a pound of wheat. Nothing can show more clearly than this national waste, the necessity of men being made acquainted with the laws of nature, which can never be transgressed with impunity ; which combine to ruin every man who regards them not : whilst there is not one law amongst them which, if understood, may not be made the ready and willing instrument of his will.

ROTATION OF CROPS.

The following principles are laid down by Chaptal for a rotation of crops :—

I. All plants exhaust the soil. They are partly supported by the earth, the juices from which constitute an important part of their nourishment.

II. All plants do not exhaust the soil equally. Air and water help nourish them; different kinds of plants require the same nourishment in different degrees.

III. Plants of different kinds do not exhaust the soil in the same manner. Plants with spindle or tap roots, draw nourishment from layers of soil in contact with the lower part of the root, while those whose roots are spread near the surface, exhaust only that part of the soil.

IV. All plants do not restore to the soil either the same quantity or the same quality of manure. The grains exhaust a soil the most, and repair the injury the least. While some leguminous plants restore to the soil a great portion of the juices they receive from it.

V. All plants do not foul the soil equally. Plants are said to foul the soil when they promote or permit the growth of weeds. Plants which have not large leaves fitted to cover the ground, foul the soil.

From the above principles, the following conclusions have been drawn :

1. That however well prepared the soil may be, it cannot nourish a long succession of crops without becoming exhausted.

2. Each harvest impoverishes the soil to a certain extent, depending upon the degree of nourishment which it restores to the earth.

3. The cultivation of spindle, or tap roots, ought to succeed that of running and superficial roots.

4. It is necessary to avoid returning too soon to the cultivation of the same, or analagous kinds of vegetables, in the same soil.

5. It is unwise to allow two kinds of plants, which admit of the ready growth of weeds among them, to be raised in succession.

6. Those plants that derive their principal support from the soil, should not be sown excepting when the soil is sufficiently provided with manure.

7. When the soil exhibits symptoms of exhaustion, from successive harvests, the cultivation of those plants which restore most to the soil should be resorted to.

From the American Farmer.

CULTURE OF RUTA BAGA.

If there be any of our readers who desire to raise a crop of Ruta Bagas for their sheep, we would remind them that it is now time to get them in. In the preparation of the soil, we would advise that it receive at least two plowings, and that the first be as deep as a strong team can make the plow penetrate the earth The manure should not be applied until just before the second plowing. It should be plowed in but a few inches, say from 3 to 4. The land should be thoroughly pulverized by repeated harrowings, and then rolled. When this is done, furrows should be traced either with the drill harrow or the corner of the hoe, North and South, an inch deep, and 27 inches asunder. Into these drills the seed should be either sown or drilled, and covered over with a compost made in the proportion of 1 bushel of ashes, 1 of plaster, and 5 of well-rotted manure to the acre ; the seed in, and the compost spread thereon, the drills should be raked over and the patch rolled.

In the preparation of the seed, they should be soaked in a mixture of oil and sulphur for 12 hours, then dried in plaster and sown as taken out of the soak.

When the plants first come up, they should be sprinkled with fish oil, by a mop, and have plaster sown over them early in the morning for several days in succession. When the roots begin to bottle, they should be thinned out so as to stand from 6 to 8 inches apart, and be hoed, without being hilled, sufficiently often to keep down weeds and keep the earth open until they be laid by. This can be accomplished at three hoeings, at intervals of a week or ten days apart.

The soil best adapted to the growth of this root is a sandy loam in good heart, and we will remark, that, to secure a good yield, manure must be liberally dispensed to them ; for, like every thing else of rapid growth, they require to be fed well ; and that, in addition to the animal manure which may be applied, ashes and lime should be added—a few bushels, say five of each, will be sufficient, and will tend not only to increase the quantity but to improve the quality. If practicable, ground bones should form a part of the mixture.

Of the eminent service, in the feeding of sheep, of the Ruta Baga, there is but one opinion. For in-lamb ewes, or those giving milk, they are invaluable; not only serving to maintain the ewes in health and strength, but to increase their capacity for secreting milk and nursing; two things of vast importance for the successful raising of their young.

From the Maine Cultivator.

PULVERIZING THE SOIL.

It was the opinion of the celebrated Tull, that good crops might be produced from the same soil for an indefinite period, simply by maintaining the earth in a finely pulverized state, in order that the roots of the growing crop might the more easily expand in every direction in quest of food ; and notwithstanding the fallacy of the theory, so far as it regards the efficacy of the mere act of pulverization without other physical means, no one can doubt the very great utility of thoroughly refining the soil we intend to crop. A very large portion of the fertility of every soil is derived from the atmosphere, principally through the process denominated æration, and by which it becomes impregnated or imbued with those fructifying gaseous agents, the action of which, under proper circumstances, and the laws of a well balanced and regulated economy, are so indispensable in the primary development and final maturation of the plant. Of the many ærified and volatile substances imbibed by the soil, the most important, perhaps, and valuable, as regards its action upon vegetation, is ammoniacal gas; and which, being copiously evolved wherever large quantities of animal manures are used, or permitted to ferment in a free atmosphere, is greedily absorbed by the soil. Now the capacity of the soil to absorb this gas, depends upon its fineness, its porosity, and the minute pulverization or disintegration of the granules of which it is composed. The more thoroughly this operation is performed, the more copious, of course, will be the influx of this fecundating gas, and the more permeable will the soil be to the roots by which it is to be absorbed and taken up. It should ever be remembered, that, other circumstances being similar the absorbent capacity of the soil is precisely in the ratio of the surface exposed.

DANA'S PRIZE ESSAY ON MANURES.

(Continued from page 89)

SECTION EIGHTH.

Manures Consisting of Salts.

In using the term salts here, to designate a class of manures, I wish to distinguish between these and mineral manures, as they are usually termed. These manures are similar in kind to the salts whose action in cow dung we have already considered. They are truly mineral salts, derived from the mineral kingdom, entering into and forming a part of plants, and from this source introduced into the dung of animals. Their action, whatever be their name, has been explained. But the salts composing the second class of manures now under consideration, are not of mineral origin. They are derived from the animal kingdom. The source from which they are formed is the living process of the animal body. They are animal salts. Here, then, let us divide the second class of manures into animal salts, which are truly manures, both their base and their acid acting as nourishers of plants—and into mineral salts. Here, again, reader, you will find that the few facts which we have pointed out, relating to the food and nourishment of animals, will help us on our way in tracing the source of these animal salts.

It has been already said, that the food of animals is divided into two classes—that which does and that which does not contain nitrogen. All domestic animals eat these classes together. In a few words, let us trace their course after the animal digested them. The one class goes to form fat, or to support the natural heat of the body, and passes off by the skin in sweat, or in moisture of the breath, and all its excess, or undigested part, goes off in dung. The excess of nitrogenous food, all that is not required for repairing the daily waste of the body, or to increase its growth, also passes off in dung, as excrement. This is a small portion, and its effects on the strength of dung have been pointed out. But the wear and tear, as we may call it, of the flesh and blood, the parts which are daily and constantly thrown out of the body as excretions, or old materials, enter the circulation, and pass out of the body in urine. This is the point to which I would call your attention. The undigested food, and the excrements not containing nitrogen, go off in dung. The food and the spent parts of the body containing nitrogen, go off in urine. This last, too, is the course of most alkaline salts taken into the body. They pass off in urine. Here, then, we come to the subject, quite prepared to understand it. The urine is a collection of salts: some are of mineral, others of animal origin. But that which gives the urine its peculiar and characteristic properties, is a substance formed from the nitrogenous food, and termed UREA. Now you need hardly trouble yourself to remember this new name: all I want you to understand about it is, that when urine is exposed to air, it rots; and this peculiar substance is changed to ammonia. That is the point to be remembered. In considering urine, therefore, as a manure, it will not be necessary to point out further the mode of its action, than to refer that of every animal to its salts and power of forming ammonia. The quantity of the last will be in proportion to the quantity of urea. There are other salts of ammonia in urine, and also mineral salts. These affect but little the value of urine as a manure. It is the *urea*, essence of urine, that substance which forms ammonia in rotting urine, which alone makes this liquid more valuable than dung. Hence, reader, if this is impressed on your mind, you will perceive that the chiefest things to be regarded in urine, are: first, the circumstances which affect the quality and quantity; second, the best mode of promoting a change of urine to ammonia; third, the time required for the process; and fourth, the best mode of preserving the ammonia, when formed. You will perceive, reader, that all along I have endeavored to point out the principles on which manures act. If you go by general principles, then for a plain practical farmer like yourself, with only chemistry enough to understand a few of its terms, it must be quite a thankless service to point out to you in detail all the various things contained in urine. All you want to know is this—does urine contain, as solid dung does, water, mould, and salts?

It does. The mould is so small a part, it may be left out of view. The salts are like those in the solid dung—mineral salts—and then we have the peculiar principle, *urea*, which for all practical purposes may be called ammonia. We may, then, with this division, present in a table the composition of the urine of various animals at one glance:

		Water.	Salts.	Ammonia.
Cattle urine, ℔ 100 lbs.		92.62	3.38	4.
Horse,	do	94.00	5.03	.70
Sheep,	do	96.	1.20	2.80
Hog,	do	92.60	1.76	5.64
Human,	do	95.75	1.88	2.36

Now cast your eye carefully over this table; the figures at once tell you the value of these different liquids. The last column gives the true value. The other salts vary much in quantity, and this affects the quality. The actual amount of ammonia in human urine and cattle dung, is about the same; yet in actual practice it is found the effects of urine are nearly double those of dung. Look, now, for the reason of this. In the first place, the principle which gives ammonia in urine, runs at once by putrefaction into that state. It gives nothing else; whereas in dung, the ammonia arises from a slower decay, and the principle which here affords ammonia, may, and without doubt does, form other products. Hence, we have a quick action with the liquid, a slower one with the solid. A second cause of the better effects of the liquid is, that it contains, besides its ammonia, a far greater amount of salts, and these give a more permanent effect.

The amount of salts in human, cow, and horse dung, is about one pound in every hundred. While the urine of the same animals contains nearly six pounds in every hundred. A third cause of the greater fertilizing action, is found in the peculiar character of some of these salts, which are composed of soda, potash, lime, &c., united to an acid formed from urea, in the animal body. This acid is like the acid of saltpetre; it is a nourisher of plants, as much so as is carbonic acid.

SECTION NINTH.

Of the Causes which make Urine Better or Worse, More or Less, and the Modes of Preserving it.

There can be no doubt that the same causes which we have pointed out as affecting the value of dung, affect also the urine.

We have already alluded (in section viii.) to the four chief circumstances to be regarded in urine. And first, of its composition. It will be affected by the age, sex, food, and difference of animal. The process of forming urine is the same in man and animals. Now if we reason here, as we surely may, from analogy, then the effect of age and sex upon the quantity of the essence of urine or urea, will appear from the result of one hundred and twenty analyses of urine, as follows:

	Grs. of Urea.
In 24 hours there are discharged by men,	432
By women,	293
By old men, from 76 to 80 years of age,	123
By children 8 years of age,	208
By children 4 years of age,	70

It will be recollected that each grain of urea is equal to a grain of carbonate of ammonia of the shops; so that a healthy man discharges daily about an ounce of this salt. If, then, other animals are affected by age and sex, as is the human species, then we may say that bulls and oxen give a better urine than cows, steers better than calves, and a venerable old cow gives nearly as much of the essence of urine as two calves.

Food affects the quantity of water, and that acting merely to dilute the urine, renders it weaker in salts for a given amount, though perhaps not the daily amount of salts. Supposing the animal well fed, so as to keep up the wear and tear of his flesh and blood, then as the urine derives it chief value from the worn-out materials of the body, the actual amount of urea daily discharged may be the same, though the amount of the urine may vary considerably. We may increase the amount of salts and acids by particular food, but this can never be continued long enough to change materially the character of urine as a manure. Difference of animal has also a great effect on the quality of urine. The more active, the greater the wear and tear of the flesh, the better the urine in working animals. Where the animal is stall-fed, there, no doubt, the urine is still richer, and the urine of fattening animals is still more valuable. Hence of all animals, commend me to swine, as manufacturers of ammonia. Cast your eye on the table (in section 8) of the amount of urea or ammonia furnished by various animals. No one exceeds the hog. He seems specially formed by nature for this office. He eats every thing. His habits require very little of that class of food which forms flesh and blood. He is a fat-former, a magazine of lard, a real oil-butt, and demands, therefore, the food essential to form fat and keep up his heat. He returns, of course, having little lean meat to form, (nobody would praise him for *that*,) having little flesh to form to increase his size, he returns quickly the waste his body suffers, as urea, which becomes ammonia. But it is only the still, and quiet, and penned animal, which gives this valuable product. If we would cause him simply to produce the greatest amount of his manufactory, without taking into account his labor in shovelling over the compost heap, perhaps no better rule can be given, than the Shaker practice of feeding with lettuce leaves. Having little brains to replenish or build up, and not quick in his nerves, (for be it known to you, reader, the opium of lettuce-leaves is supposed to contribute mainly to the formation of brain and nerves,) the opium-eating hog will return a vast amount of the nitrogen of his lettuce in the shape of ammonia. If now you add to the facts, common to the nourishment of swine, the action of ammonia on mould, as it has been explained, you will see, that he who neglects to fill his yards with mould, and swine to convert it, overlooks one of the cheapest, most effectual, and certain modes of forming manure, which practice and theory unite in pronouncing the surest element of the farmer's success. Not only is the quality of urine affected by age, sex, food, difference of animal, but the season also exerts an influence upon this liquid. The urine of cattle often contains ammonia ready formed in summer, but never in winter. In cold weather, the amount of ammonia, or rather the principle affording it, is less: often it is not one-half in winter what it is in summer. This certainly is a misfortune to the farmer, who generally keeps his cattle up only in winter; but then it is an argument also for the practice of summer soiling.

Secondly, with respect to the circumstances necessary to change urea to ammonia; or, in short words, to fully ripen urine, or to make it a fit manure. These also depend upon the season, in part. It is to be remembered, reader, that this rotting of urine is only fermentation. It takes place because there is a principle in urine which brings on fermentation, just as it does in new cider. Now if it is by fermentation that urine rots, it will take place, as all fermentation does, best at a moderate temperature. The cold of winter will prevent it. Hence your winter manure must be allowed time, as the heat of spring comes on, to ferment, that the urine may be changed to ammonia; and every means must be taken to prevent the heat rising beyond, in the manure heap, or falling below a moderately temperate warmth. These are the circumstances which chiefly promote the change from urea to ammonia.

Thirdly—in regard to the time in which this change will take place, it will require at least one month; and six weeks are better. If urine

be allowed to rot for a month, it fully doubles its quantity of ammonia. In fact, it would have contained more than double the ammonia of fresh urine, had not a portion escaped. This brings us to our fourth point, the best mode of preventing the flying off of the ammonia when this change has taken place.

Much has been said about tanks, and vats, and urine-pits and many plans devised for preventing the escape of volatile ammonia. But when once the action of ammonia upon mould is understood, as we have already pointed it out, I am persuaded, reader, that these tanks, and vats, and urine-carts will appear to you not only expensive and cumbersome, but useless. Your first point is, to save your ammonia, your second is, never to use urine in its caustic or burning state. If you do, you will assuredly burn your crop, as the puddle formed by a cow burns the grass upon which she empties her watering pot. Here the urine forming caustic ammonia acts as would caustic potash, or a lump of stone lime, left to slake upon the grass. You want to change this burning or caustic ammonia into mild ammonia, or to combine it with some substance which has not only that effect, but also keeps it from flying away. Unless you understand, then, the principles of these actions, and apply them too, your labor is all vanity, when you attempt to save your own or cattle's urine.

These principles are, in number, two. First, the principle which changes caustic to mild ammonia, is carbonic acid derived from air, or decomposing mould. Second, the principles which render ammonia less volatile, or wholly fixed, are certain acids formed in mould, as sour mould, or certain salts which give up their acid to the ammonia. Plaster of Paris does this, by changing its lime for ammonia. Now let us go into the reason of this a little, and see if we can understand it. Very slowly and supposing moisture present, the oil of vitriol of the plaster quits its lime and unites to the ammonia, and so changes a volatile into a fixed salt. Now this is a change which has been of late much insisted on, and the practice recommended of strewing the stable and barn-cellars, and even the privies, to save ammonia which escapes in these places. But it is doubtful whether the saving is as great as is usually supposed, for the ammonia arising from the urine is caustic, it flies off as caustic ammonia, that has no effect upon plaster. To produce this mutual effect of ammonia and plaster, the caustic ammonia must previously have been made mild. However, this plan is applicable only on a small scale. Copperas, alum, common salt, potashes, and woodashes, all act to fix the volatile ammonia, and have all been recommended for this purpose. But it is easily seen, that, in employing some of these substances, is to buy ammonia almost at apothecary's price. These practices will be followed, therefore, only by those who place the crop and its value upon ammonia. This is a limited and narrow view. The true and farmer-like, as well as the most scientific and natural mode of preserving the ammonia of urine, is to fill your yards and barn-cellars with plenty of mould; by which I mean truly decayed and decaying vegetable matter, as well as loam. There is no mode more effectual, no mode more economical. Consider now for a moment how mould formed and forming, and ammonia act. Have I not said again and again, that ammonia hastens decay? makes mould more easily dissolved? and cooks the food of plants? That action having occurred during its progress, acids were formed. The ammonia unites with them, loses its burning properties, and becomes fixed. The acids having been satisfied, the ammonia is actually imbibed and retained by mould.

It does not drink it in, like a sponge, but the mould forms a peculiar chemical compound with ammonia. This peculiar compound, while it does not render the mould an easily dissolved matter, yet holds ammonia by so feeble a force, that it easily yields to the power of growing plants. It gives up the stored ammonia at the place where, and the time when, it is most wanted. If you remember these actions of mould and ammonia, it will be as plain as day, that what we have said of the inexpediency and expense of vats and tanks, and urine-carts, must not only be true, but is confirmed by the experience of a host of hard-working, thinking, practical men. In connection with urine, the dung of birds, for instance, domestic fowls of all kinds, and pigeons, may be here mentioned. These animals discharge their solids and what we may term their liquids together. Their urea comes out combined with or forming part of their dung. Now reflecting a moment on the nature of their food, strongly nitrogenous, being seeds, grains, &c., or animals, bugs, grasshoppers, &c., we can understand why their droppings are peculiarly rich in ammonia and salts. The strongest of all manures is found in the droppings of the poultry-yard.

But since these form but a small portion of the farmer's stock, and are never regarded as a principal source of manure, their further consideration may be omitted. It may perhaps be here added, that as from their nature bird-droppings run quickly into fermentation, with warmth and moisture, so they act quickly and are quickly done. They are more allied to sheep dung than to other manures. Their mould not being great, droppings of poultry require to be mixed with decayed vegetable matter, or loam. To this class belongs the manure brought from the Pacific Ocean, under the name of Guano, a Spanish word for excrement. New England farmers can find cheaper sources of salts, to which the main value of guano is owing, and therefore, reader, we shall detain you no longer on this point.

Section Tenth.

Mineral Salts or Manures.

Having thus considered the salts derived from the animal, let us now proceed to those derived from the mineral kingdom. Among these we shall find some whose action is similar to that of the animal salts. That is, they are the true nourishers of plants.

They afford, by the action of the growing plant, the same elements as the animal salts. Of this nature is saltpetre. Now, reader, I want you to understand by saltpetre, not only that well known substance, but also that which has lately been much used in farming, South American saltpetre. This differs from common saltpetre by changing its potash for soda. One step more: I want you to understand by saltpetre, not one salt, but, in farming, a class of salts; that is, a number, having the same acid, which may be combined with several different bases which all act one way. Saltpetre being a salt, of course must be composed of an acid and base. The acid is always aquafortis or nitric acid. The base may be potash, or soda, or lime, or ammonia. These all may be called saltpetre. In forming saltpetre, it is generally that variety which contains lime and aquafortis, which is procured. So far as we understand the action of salts, and this has been fully explained, the action of the varieties of saltpetre is the same; and were it not for the peculiar nature of the aquafortis or acid of saltpetre, the explanation of the action of this salt might be referred to the general laws above set forth. But the acid of saltpetre is composed of volatile ingredients. It is nothing more nor less than a compound of the common air we breathe. Surprising as it may seem, reader, yet it is not the less true, the common air is a mixture of oxygen and nitrogen. What a bland and harmless, yea, what a healthful blessing is air, not only to us but to plants! It is a mere mixture, not a chemical compound, a mere mixture. In every hundred parts, eighty of nitrogen, twenty of oxygen. Yet if you compel, as natural operations are continually compelling the air to unite chemically, so that fourteen parts of nitrogen shall unite to forty parts of oxygen, you will form aquafortis. Now I do not mean to trouble your head further with the chemistry of saltpetre, than merely to say, that having thus shown you the composition and origin of the acid of all kinds of saltpetre, you will readily see, that a substance which affords such an abundance of nitrogen, cannot but be beneficial to plants. This nitrogen may and probably does form some portion of ammonia in the soil. It may enter as nitrogen into the plants dissolved in water as a very weak aquafortis.

We have said so much upon the action of ammonia and nitrogen, that you will perceive how important a part nitre is likely to play in manure. Not only does the nitrogen act here, but the oxygen, the other component of the acid, also acts. It acts upon the mould as air itself would. Besides, the mould of soil and manure imbibes and condenses this oxygen in its pores, and consequently heats a little; so that saltpetre, whether added as such to soil, or formed in manure, as it is always, helps to warm a little the soil, like fermenting manure. So far as these effects are desirable, they may be expected from the use of saltpetre. But this, reader, if you buy your saltpetre, is procuring a small effect at a great price. The action of the alkali of saltpetre is not different from alkali in other shapes; and therefore if you have money to lay out for salts, let me advise you, reader, to spend it rather for ashes than for saltpetre.

(To be Continued.)

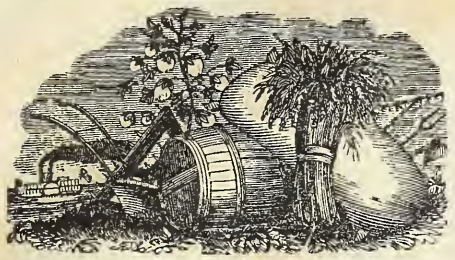
From the American Farmer.

CLAY AS AN AMENDER OF SANDY SOIL.

It is many years now, since we first advanced the opinion that clay, if added to sandy soils, would tend greatly to amend their texture. Since then, we have often repeated that opinion, and we will now add, that a compost made of 10 loads of virgin or unexhausted clay, and the same number of loads of stable manure, if well incorporated together, spread broadcast, plowed in, and thoroughly mixed with the soil turned up, will go farther, last longer, and produce a larger yield throughout a rotation, than would 20 loads of the same quality of manure if applied alone. To us the philosophy of this opinion is obvious, and its reasonableness will strike any one who will take the time to make the necessary inquiries and weigh the operating causes in his mind. Most virgin clays contain very sensible portions of potash, a substance indispensible to the healthful growth of most plants; therefore, in adding clay to sand, we supply a salt absolutely essential to successful culture, and which does not naturally abound, except in very minute traces, indeed, in soils where silex very largely predominates. But this is not the only advantage to be derived from the admixture. Sandy soils, from their porousness—from the absence of the principle of cohesion—lose much of the riches of the manure which may be applied to them, by their natural tendency to yield to the influence of the sun through the process of evaporation.

Another evil of sandy soils arises from the natural disposition inherent in them to infiltration, or in other words, to the sinking of the manure caused by each succeeding rain. Nor is this all; such soils, except when well filled with vegetable and animal manures, possess in a very slight degree the capacity of absorbing and retaining food from the atmosphere. This defect, however, may be cured by the addition of clay. However well porous lands may be manured, unless the season should be a moist one, their products will be comparatively small, because of the escape, by evaporation, of the enriching gases, and from their natural tendency to give up that moisture without which plants cannot prosper.

Plowing-in Green Crops.—Living plants contain in their substance not only all they have drawn from the soil, but also a great part of what they have drawn from the air. Plow in these living plants, and you necessarily add to the soil more than was taken from it—in other words, you make it richer in 'organic' matter. Repeat the process with a second crop, and it becomes richer still; and it would be difficult to define the limit beyond which the process should not further be carried.



WEDNESDAY, JUNE 26, 1844.

Our Bound Volume.—Those of our friends who have ordered the first volume of the Cultivator bound, are informed that they are now ready, and will be delivered to their order. We should have forwarded them by mail, but the postage, which is the same as letter postage, has deterred us. To all such as cannot conveniently send for them, we will send the volume unbound.

The Crops.—Time and space are but allowed us briefly to state, that from all quarters our accounts of the *Cotton Crop* are of the most favorable character. In most districts, the plant appears to be in a much more forward condition than last year—while in others, where later planting has prevailed, a good stand is promised. All that appears to be needed now, is the continued prevalence of the present favorable weather.

Our accounts of the *Grain Crops* are also equally favorable. In some parts of North Carolina, Virginia and Maryland—and some sections of the great grain-growing States of Ohio, Illinois, &c.—the ravages of the fly are spoken of as likely to affect the *wheat* crop materially; but generally, an unusually abundant yield seems to be anticipated. *Oats* are represented as being rather light in most quarters; while the *Corn* appears to be in quite a favorable condition.

Taking into view all sections of the country from which we have advices, our present impression is, that the grain crop, as a whole, will rather exceed, than fall short of, an average one.

The Committee on Agriculture, of the New York Legislature, in their report, remark that "they believe full one-third of all agricultural labor is literally thrown away, by its misapplication."

Corn Oil.—The St. Louis Republican says that a gentleman residing near that city, has recently commenced the manufacture of oil, of fine quality, from corn. It is said to burn with a clear, steady light, in every respect equal to sperm or lard oil, without the smoke which usually attends vegetable oils, and will not congeal in the coldest weather.

Cure for Burns.—The Medical Times says: "After opening the vesicles, if they are formed, the part is dipped in cold water, and then plunged, still wet, into flour, keeping it there for a minute or two; by this means a certain quantity adheres to the part, and prevents the access of the air. It is remarkable that the flour falls in the scales from the surrounding parts the next day, whilst on the burn it remains adherent.

A Memoir on the Origin, Cultivation and Uses of Cotton, from the earliest ages to the present time, with especial reference to the Sea-Island Cotton Plant, including the improvements in its cultivation, and the preparation of the Wool, &c. in Georgia and South Carolina; read before the Agricultural Society of St. John's Colleton, November 13th, 1843, and the State Agricultural Society of South Carolina, December 6th, 1843, and by both Societies ordered to be published. By Whitemarsh B. Seabrook, President of the State Agricultural Society of South Carolina. Charleston: Miller & Browne.

The foregoing is the title of a handsomely printed pamphlet, of 62 pages, for a copy of which we are indebted to Mr. A. E. Miller, Publisher of the "Southern Agriculturist," and which we take great pleasure in recommending to the careful perusal of all our agricultural friends, as a work eminently entitled to their consideration. It is spoken of by all who have examined it, as a production of the highest merit, from the elaborate research which it evinces in the author, and the skill and ability with which he has handled his subject, and applied his knowledge to the elucidation of the science of Agriculture, in the particular branch to which this essay is devoted. We feel assured, therefore, that we cannot do our readers a better service, than in urging them to examine the work in question.

The book is for sale by Messrs. C. E. Grenville & Co. and Mr. T. Richards, in this city. Price 25 cents.

"The Indigator," is the name of a new monthly agricultural paper, published in Hamburg, S. C., by J. W. Yarborough; the first two numbers of which have been received The work is got up in very good taste, and may become a valuable auxiliary in the cause of agriculture. The increased interest which is being excited throughout the South on the subject of agriculture and agricultural papers, is among the most favorable omens of the spirit of improvement abroad in the land.

Fence Posts.—A practical farmer informs the Hartford Times, that in taking up a fence that had been set fourteen years, he noticed that some of the posts remained nearly sound, while others were rotted off at the bottom. On looking for the cause he found that those posts that were set limb part down, or inverted from the way they grew, were sound. Those that were set as they grew were rotted off. This fact is worthy the attention of farmers.

If the foregoing is a fact—of which we should like to have further evidence founded on experiment—it must be in consequence of the absorbent vessels of the tree being reversed, which prevents the dampness of the earth being carried upward with that rapidity which would otherwise be the case.

☞A man in Ohio, well mounted, was urging on a drove of fat hogs towards Detroit, met a charming lot of little girls, as they were returning from school, when one of them, as she passed the "swinish multitude," made a very pretty courtesy.

'Why, my little gal,' said the man, 'do you courtesy to a whole drove of hogs?'

'No, sir,' said she, with a most provoking smile, 'only to the one on horseback.'

Croup.—Two or three spoonsful of strong ley, made of oak ashes, and mixed with molasses, are recommended as a positive cure for croup.

Sprains in Sheep.—The best mode of treating sprains is to immerse the limb in a pail of hot water for half an hour at a time, several times a day. Apply the hot water as soon after the accident as possible.

☞Do not despise the poor. Remember that while honest virtue is often clothed in rags, vice flaunts gaily in satin, and dazzles the eyes with costly jewels.

☞The blood of a white hen, (says the N. E. Farmer,) smeared on a freckled face, and suffered to dry thereon, and afterwards wiped away, clearly takes away all spots from the same.

To take Film from a Horse's Eye.—Blow loaf sugar and a little salt into the inflamed eye, and in most cases it will be relieved. Sassafras buds pounded, and put in water, to stand till it becomes nearly as thick as cream, applied to the eye, is an excellent remedy for inflammation.

☞For sting of the adder, or slow-worm, apply immediately strong spirits of hartshorn.—For sting of bees, apply chalk or whitening mixed with vinegar.

☞Poisons swallowed by oxen are commonly the yew, the water dropwort, and the common and the water hemlock. One and a half pints of linseed oil is the best remedy.

From the Gardener's Chronicle.

ANALYSIS OF SOILS.

The following is a method of analysing soils for ordinary agricultural purposes:—Weigh a convenient quantity of the earth to be analysed, say 1000 grains, dried in the open air; dry the same before a fire on paper, so as not to scorch the paper; re-weigh, and the difference will be the organic matter. Pour a convenient quantity of muriatic acid on the remainder; stir, and when settled, pour it off, and add oxalate of ammonia: the precipitate will be the lime. Mix the remainder with water, and stir it well; when a little settled, pour off the turbid mixture, and the suspended contents are argillaceous, and the deposit siliceous.

SADDLE GALLS.

Saddle Galls are generally occasioned by an unequal pressure on the saddle, or by a saddle being badly fitted to a horse's back, and if neglected they grow into very ugly and troublesome sores. When these inflamed tumors are first discovered, cold water alone is frequently sufficient to disperse and drive them away, if applied as soon as the saddle is pulled off; but when that will not have the desired effect, by washing them twice a day in the mixture I shall here recommend, the cure will be readily performed.—Take of sharp vinegar one gill; spirits of any kind, one gill; sweet oil or fresh butter, one table spoonful: to be well mixed before used.

From the Gardener's Chronicle.

LIME AND SALT.

I tried this mixture on two acres of old grass land, having mixed them in the proportions recommended by Mr. Cuthbert Johnson. A heap was made, and the lime and salt were laid in alternate beds, then mixed up together, and well covered over with soil and sods. After three months, this was applied to the meadow in question; it was in a state resembling mortar, and was with difficulty spread; after it became dry, it was beat to pieces, and spread and bush-harrowed. In many parts of the field, the grass appeared as if it was scorched. It did not grow luxuriantly, and the crop was the worst I ever had—in some parts not worth cutting.

From the Farmer's Monthly Visiter.

HOME AFFECTIONS.

The heart has memories that cannot die. The rough rules of the world cannot obliterate them. They are memories of home, early home. There is magic in the very sound. There is the old tree under which the light-hearted boy swung in many a summer day; there is the house where he knew a parent's love, and found a parent's protection—now there is the room in which he romped with his brother or sister, long since, alas! laid in the churchyard in which he must soon be gathered, overshadowed by yon old church, whither, with a joyous troop like himself, he has often followed his parents to worship with, and to hear the good old man who gave him to God in baptism. Why even the very school-house associated in youthful days with thoughts of ferule and tasks, now comes back to pleasant remembrances of many an attachment there formed, many occasions that called forth some generous exhibition of the traits of human nature. There he learned to tell some of his best emotions. There, perchance, he first met the being who, by her love and tenderness in after life, has made a home for himself happier even than that which childhood knew.—There are certain feelings of humanity, and those too among the best, that can find an appropriate place for their exercise only by one's own fireside. There is a sacredness in the privacy of that spot which it were a species of desecration to violate! He who seeks wantonly to invade it, is neither more nor less than a villain; and hence there is no surer test of the debasement of morals in a community, than the disposition to tolerate in any mode the man who disregards the sanctities of private life. In the turmoil of the world, let there be at least one spot where the poor man may find affection that is disinterested, where he may indulge a confidence that is not likely to be abused.

From the Boston Cultivator.

WARMING LANDS.

Mr. Josiah Lovett, of Beverly, who has been remarkably successful in raising various kinds of vegetables, as has appeared by his superior exhibitions at the Horticultural Rooms, in a late No. of the New England Farmer, gives his mode of warming land, by which he gets vegetables almost as early as they are produced in the vicinity of Boston, though the season in Beverly is at least a week later, and Mr. Lovett's land is moist and low.

His method is, to plow or spade, or in working the land in any way, to do it *while the sun shines clear*, and, if possible, from 11 to 4 o'clock. By this means, the warm surface earth is turned under, the cold earth brought up and warmed, and buried in turn. This is repeated two or three times, on warm sunny days. Seeds planted on land thus warmed, a week or ten days later than on land plowed or spaded but once, will mature their fruit earlier and of a superior size, with the same manuring and attention.

This system is founded on the true principles of philosophy, as will appear evident to every person of reflection, and we doubt not may be turned to a good practical account. The superior crop, from a more thorough pulverization of the soil, and mixing it well with manure, will amply compensate for the extra plowing.

From the Farmer's Monthly Visiter.

ASHES IN THE HILL.

We advise young farmers not to put ashes in the hill with the corn; the ley they make is often destructive to the young roots when they first protrude from the kernel. The ashes may be dropped on the hill as soon as you have planted your field, and this is better than to wait till the corn is up; it is less labor, and it tends better to keep off the worms. Bury neither corn nor potatoes deep; both should lie on an easy bed, for the first shoots tend downward when the soil will permit them. When the earth is moist enough, half an inch of covering, pressed down with the hoe, is better than more.

From the Western Farmer and Gardener.

TO PROTECT VINES FROM BUGS.

A subscriber communicated to us, a few days ago, a fact relative to the destruction of such bugs and winged insects as are injurious to cucumber and melon vines, &c. He has practiced it for several years, and found it very effectual in protecting the plants from the destructive ravages of these insects. The method is as follows: Just at evening, he kindles a small fire, (or if the patch be large, several may be necessary,) that will blaze freely, in some convenient place, where it will not injure the plants. He then, by brushing the plants, alarms the bugs, so as to cause them to take wing, when they fly directly into the fire, and are destroyed.

Scare-Crows.—The best protection for our corn, from the depredations of the crows, is white twine stretched across the field, supported by stakes or poles, in several directions; the appearance of which seem to give these *darkies* an idea of a net or snare, of which they are very shy. For fear, however, they may become accustomed to it, take the additional precaution of tarring, and rolling the seed in plaster.

The Bite of a Rattlesnake.—The most simple and convenient remedy, says a correspondent of the Macon Messenger, I ever heard of, was alum. A piece the size of a hickory nut, dissolved in water and drank, or chewed and swallowed, is sufficient. I have a good authority for saying it has been tried many times on men and dogs, and that they have invariably recovered. I know of some planters whose hands are exposed to be bitten by rattlesnakes, who always have them provided with it, in their pockets, and they have several times found use for it.

Bad Air in Wells.—Never go down into a well which has been at any time out of use; or it it be deep, without trying the air in it. This may be done by lowering a lighted candle—if it burns, there is no danger; but if it goes out, the air is bad, and death would be the consequence of venturing into it. It is said that the air may be speedily corrected by putting into the well, say from half a bushel to a bushel of quick lime, which will absorb the carbonic acid gas—the agent alike deleterious to comfort and respiration.

Farming at Cape Cod.—The farming interests on Cape Cod, appears to be on a rather more precarious footing than any where else, where agriculture is pursued to any extent. A couple of acres of land planted with corn by Mr. Harvey Hawes, at Dennis, was blown away by the wind, a few days since, to such a depth that it was impossible to tell which part remained planted, and which did not. We have heard strange stories of Cape Cod farming before—how they foldered their cows upon codfish, and weaned the calves upon pickled herring, and all that; but this business of having their freehold taken off bodily by a nor'-wester, is a calamity that is quite new to us. Why don't the Cape Codmen *kellock* their corn fields as they do their mackerel boats, or tie up their potatoe patches to a tree, when they see a squall coming?—*Boston Mail.*

To make Water Cold in the Summer.—The following is a simple mode of rendering water almost as cold as ice:—Let the jar, pitcher or vessel used for water be surrounded with one or more folds of coarse cotton kept constantly wet. The evaporation of the water will carry off the heat from the inside and reduce it to a freezing point. In India and other tropical regions where ice cannot be procured, this is common. Let every mechanic or laborer have at his place of employment two pitchers thus provided, with lids and covers; the one to contain water for drinking, the other for evaporation, and he can always have a supply of cold water in warm weather. Any person can test this by dipping a finger in water, and holding it in the air of a warm day; after doing this three or four times, he will find his finger uncomfortably cold.

Face Ache.—The common affection, so often supposed to be excited by a diseased tooth, although the latter fails to be detected—a rheumatic, chronic kind of pain, wholly different from that of tic-douloureux,—is often speedily curable by muriate of ammonia. This salt should be given in doses of half a drachm, dissolved in water, three or four times daily. About four times will be sufficient to test the potency of the remedy. At other times the iodine of potassium, in five or six grain doses, is quickly effective towards a cure. The efficiency of the latter remedy renders it probable that that affectation is of the nature of periosteal inflammation. —*Dr. Watson's Lectures.*

☞Louisiana raised in 1843, 37,173,590 lbs. of Sugar, while Georgia raised 185,758,138 lbs. of Cotton.

☞"Necessity is the mother of invention," as the cook said when she took her night-cap for a pudding-bag.

CONTENTS OF THIS NUMBER.

Communications.

Overseers,....page 97
Worn-out Lands, Scooter and Shovel Plows,....98
Hill-side Ditching, Manuring, &c.,....98
Bees,....99

Selections, Extracts, &c.

New Method of obtaining Cream,....99
Compost Manure,....99
Wasteful management of Manure,....100
Rotation of Crops....100
Culture of Ruta Baga,....100
Pulverizing the Soil,....100
Dana's Prize Essay on Manures, Sections VIII, IX and X....101-102
Clay as an Amender of Sandy Soils,....102
Editorials—The Crops; Corn Oil; Cure for Burns; Editorial Notices; Fence Posts; Croup; Sprains in Sheep; etc.,....103
Analysis of Soils....103
Saddle Galls,....103
Lime and Salt,....103
Home Affection....104
Warming Lands,....104
Ashes in the Hill,....104
Scare-Crows....104
Bite of a Rattlesnake,....104
Bad Air in Wells,....104
Farming at Cape Cod.; To make Water Cool in the Summer; Face Ache, etc....104

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DANA'S PRIZE ESSAY ON MANURES.

(Concluded from page 102.)

SECTION ELEVENTH.—*Of Artificial Nitre Beds.*

But there is a fashion in manures as well as in other things, and saltpetre is now so fashionable, that you may be inclined to use it. Be it so. I will show you, reader, how to make it for yourself, and at the same time form a large pile of capital mould. But as you have began to inquire a little into the reason of things, let us go a little into the reasons why the earth under all barns where cattle are kept, why the plaster of old houses and cellar walls, always afford saltpetre. You well know that this is the case, and why? We have already told you that the acid of saltpetre, that is, the aquafortis, is formed of the air we breathe. Now alkalies and porous bodies compel the constituents of air, under certain circumstances, to unite and form aquafortis, and this immediately unites to the alkali and forms saltpetre. The best alkali to compel this union is ammonia. Hence, where plenty of animal matter is fermenting, or rotting, or where plenty of urine is, there, porous bodies being present, saltpetre will be formed. Now this is enough for you to understand the principle upon which I propose to you to form an artificial nitre-bed for your own use. It has been found that the manure of twenty-five cows, asses and mules, in layers of about four inches thick, with layers of the same thickness of chalky soil, first one and then the other, and now and then damped with the urine of the stable, produces from 1000 to 1200 pounds of saltpetre in four years.

The heap is formed under cover, and occasionally shovelled over. At the end of two years, it is a mass of rich mould. It is left two years longer, with an occasional turning over, but it is not wet with urine for the last few months. The dung the farmer has always; he wants the porous chalky body. This may be furnished by spent ashes, mixed up with its bulk of loam. Hence the following rule may be given: One cord of clear cow-dung, one cord of spent ashes, one cord of loam, or swamp muck. Mix the ashes and the swamp muck well, and having hard-rammed the barn cellar floor, or that under a shed, lay a bed upon it four inches thick of these mixed materials; then a layer of dung, three or four inches thick, and so on, till the pile is two or three feet high, topping off with loam. Wet it occasionally with urine, keeping it always about as moist as garden mould. Shovel over once a fortnight for two years. The pile now contains about fifty pounds of several varieties of saltpetre, and mixed throughout with nearly three cords of excellent manure. It may, therefore, be now used according to the farmer's judgment.

By thoughtful management, he may, after the first two years, annually collect as many fifty pounds as he employs cords of cow dung. But, however prepared, nitre affords, by its elements, nourishment to plants. All its parts act. Its alkali acts, and its acid acts.

SECTION TWELFTH.

Ashes.

It is easy to see that salts, whatever be their name or nature, which are likely to be of any service to the farmer, are those only which either enter into and form part of the plants, or which, by the action of their acid or base, act on the earthy parts of soil, or upon the mould. Salts either poison or nourish plants. The first, like the medicines we take, are good in small doses; the second can hardly injure, even by their excess. If we recur to the principle with which we set out early in this essay, that the ashes of plants contain all their salts, then rightly to know what salts are likely to produce good effects as manure, we should first study the composition of ashes. We have in ashes a great variety of substances. They come from the soil. They form a part of plants. The dead plant returns them again to their mother earth, or we, losing the volatile parts of a plant, its mould and ammonia, by burning, collect its salts as ashes. Let us see what these salts are made of. In the first place, you know, all salts are composed of an acid and a base.

The bases are,	*The acids are,*
Potash and soda,	Carbonic, or carbon united to oxygen,
Lime,	Phosphoric or phosphorus
Magnesia,	do. do.
Clay,	Sulphuric, or Sulphur do.
Iron,	Muriatic, essentially com-
Manganese,	posed of chlorine.
Silex, or earth of flints.	

Now if we throw out the carbonic acid, which has been formed in burning, we have left in ashes three acids, which are united with the bases, and may form the following salts in plants, viz: Glauber's salt, Epsom salt, common table-salt, bone-dust, a salt of lime, and what we may term a bone-dust salt of iron, or phosphate of iron, plaster of Paris, or gypsum, copperas, alum, and some other salts, which need not be enumerated. Our list comprises the principal, and those most likely to be used in farming. Well, now, the lesson to be drawn from this composition of ashes is this, that there is scarcely any salt occurring in commerce, which may not be used in agriculture, instead of those found in ashes. In fact, almost all salts which occur in a large way, as refuse materials from manufactures or other sources, have been used, and all with greater or less success, as manures. And if you cast your eye over the acids and bases of common ashes, this seems quite reasonable. It is not expected that a plain farmer, possessing little or no chemical knowledge, should be able to tell beforehand, what the effect of a salt would be, applied to his land; but if he understands what the composition of ashes is, he may be sure that in any quantity in which the salt is likely to occur, it cannot be injurious, provided it is mixed up with plenty of mould, and a little ashes, or alkali, which will kill or neutralize any excess of the poisonous acid.

In ashes, we have one part which may be leached out, and a part which remains after leaching, called spent ashes. Let us see, then, in leaching, what parts we take away. First, we take away all the acids, except the phosphoric. Secondly, we take away nearly all the potash and soda. What is left? The phosphoric acid, and all the bases. It is evident, therefore, that the strength of ashes can never be wholly leached out, if that depends upon the salts. In spent ashes we have nearly all the bone-dust left; and besides this, a portion of what is usually considered the real strength, that is, the potash. This is chemically united to certain of the other constituents of ashes. You cannot leach it out. Upset your leach-tubs, shovel over your spent ashes, mix it up with fermenting manure, where a plenty of fixed air is given off. Here is the secret of the value of spent ashes, so far as the potash or ley strength is concerned. This exposure to air, to carbonic acid, lets loose the potash, which was chemically combined with the other matters. Water would never have done this. Mark, now, a practical lesson taught here by chemistry, and confirmed by experience. *Leached ashes must never be used on wet soil,* if we want its alkali to act. The close wet soil, perhaps even half covered at times with water, excludes the air. The carbonic acid of air, that which alone extracts the alkali from spent ashes, cannot here act. There is this other lesson to be learned from these facts, that it is chiefly the *alkaline* action which is wanted from spent ashes. Hence, no one who thus understands the source, and the true value of ashes, will allow the alkaline portion to be first leached out, unless he can find a more economical use for it than its application as a fertilizer. Perhaps no fact speaks louder, that the great action of spent ashes is that of its potash, than this, that where we prevent that from being extracted, the spent ashes are of little value. If, then, spent ashes derive their great value from the potash, much more will *unleached* ashes derive *their* value from their potash.

Now, reader, the point to which I have led you in these remarks, is this: that the more alkaline any salt is, the better is it for manure. Hence, as a general rule about the use of salts, it may be laid down that the alkaline salts, that is, potash, pearlash, common ashes, barilla ashes, white, or soda ash, are the best. And as these, in all their various shapes, are the cheapest and most common articles, so you need not run after a long list of other salts. Next in value to the real alkalies, are spent ashes, used in a light, porous, open, sandy soil, if you would derive the greatest benefit from them. Next to these comes peat ashes. You well know these are of no value to the soap-maker. But not so to you. They show only traces of alkaline power. But treat them as you did spent ashes. Their power, independent of their bone-dust, which is by no means small, and their plaster, which is still greater, and their lime, which is perhaps the greatest, lies in the *alkali* which is locked up, as it is in spent ashes. Treat them, therefore, as you did spent ashes, and then peat ashes will, and do, afford alkali. So too coal ashes, even your hard anthracite ashes, yield all the substances which spent ashes do. It is easily seen, therefore, when, how and where, spent ashes, peat ashes, coal ashes, are most likely to do good. Perhaps we may not have a better place to state the fact, that a cord of soap-boiler's spent ashes contain about 50 pounds of potash. When we add to this, 117 pounds of bone-dust, and about a ton and a half of chalk, or carbonate of lime, which acts chiefly on the soil, and so comes not now under consideration, it is seen that there is no cheaper source of alkali and salts, to one within reasonable carting distance of a soap-boiler, than spent ashes. They are marl, bone-dust, plaster, and alkali combined.

SECTION THIRTEENTH.

Manures composed chiefly of Mould.

These are of vegetable or animal origin. And first, of animal mould. Here we shall find

that we come, perhaps, better prepared to understand this part of our subject than either of the preceding classes. We have explained the principles which enable us to understand why it is that animal and vegetable substances produce, by decay, identical matters. The only difference consists in the quantity of these matters. Let me here, reader, call to your remembrance the facts we stated respecting the two classes of food, and the two classes of substances formed from that food by animals. A certain portion of that food contains none of that principle which forms ammonia. This portion of food makes fat. Another portion of food contains the substance which forms ammonia. This part of the food forms flesh and blood, and the other parts of the body, skin, hair, feathers, bristles, wool, horns, hoofs, nails and claws, thews and sinews. Now, when a body dies and decays, the mould which it forms will be rich manure, or poor manure, just in proportion as it contains more or less of the substances formed out of that portion of food which furnishes flesh and blood. The fat, therefore, in animal mould, plays a very inferior part to that acted by the flesh and blood. In a word, as I wish to dismiss the fatty matters from our present consideration, I may do this, reader, by stating to you all that you need know, that in decay, fat forms chiefly carbonic acid. If, therefore, you call to mind what we have said about the action of that, you will see how fat acts in manure. But the flesh and blood, and the substances formed from it, give precisely the same things as vegetables do when they decay, that is, water, mould and salts. The great difference between the decay of animal and vegetable matters, is this: that as the animal bodies are far richer in the substance which forms ammonia, so they afford a richer source of manure. The animal body contains that element, in quantity enough, not only to fill the pores of its own mould, but also enough to impregnate a large quantity of mould from other sources. The vegetable body, on the contrary, contains scarcely enough ammonia to fill its own mould. Vegetables differ in the quantities of the elements of food which can furnish flesh and blood, and hence those vegetables are best for manure which furnish most ammonia. We have already remarked on the difference, in this respect, between straws, grasses, and clover. But without going further into this comparison, which can have no other practical bearing than to show you the immense difference in value, in animal and vegetable bodies, in forming manure, we may here resolve the subject into one great principle. The substance which forms flesh and blood, whether derived from plants or animals, alone forms ammonia during their decay, and the mould thence arising, is rich or poor manure, just in proportion as it contains the substance fit to form flesh and blood. Starting from this principle, we find that animal substances, as flesh, fish, fowl, the body generally, including its various forms of covering, hair, wool, feathers, nails, hoofs, horns, claws, &c., afford, in the process of decay, about ten times more ammonia than the straws and grasses usually entering into the compost heap.

The animal bodies give more volatile alkali than their mould can contain. It is given off in such quantity that decay is rapidly hastened. All the signs of putrefaction, therefore, rapidly take place. The quantity of mould being small, nothing holds the volatile parts—they escape and are lost. Now, common sense and practical foresight have stepped in here, from time immemorial, and taught mankind the necessity and the utility of preventing the waste of the volatile and most valuable parts of the decaying animal substances, by covering them in with earth, soil, &c. These imbibe the escaping virtue or strength, and become rich and fertilizing. It remains to state, that every pound of animal carcass can impregnate ten pounds of vegetable mould; or, taking our arable soils as they usually occur, one pound of flesh, fish, blood, wool, horn, &c., can fertilize three hundred pounds of common loam.

You will see, therefore, reader, how little you have now to learn of the necessity of saving every thing in the shape of animal matters, and converting them to manure, by turning them into your compost heap. It is to be remarked, that the dry forms of animal substances undergo the process of decay very slowly, when left to their own action. Wool, hair, flocks, horn-shavings, &c., or even leather chips and curriers' shavings, bear long exposure, and seem quite indestructible. They yet are rich in all the true virtue of manure. They want something to bring this out, to set them a working, to bring on fermentation. Well, on this head we may lay down two rules; the first is, that if buried among a heap of fermenting matter, that communicates a similar change to these dry, animal substances. This is slow work. The second rule is, that if these dry matters are buried in the soil among the roots of growing plants, then these act more powerfully than fermentation, and the dry substances are converted to manure with a speed which may be called quick, compared to the fermenting process.

The practical lesson to be drawn from these differences of action between the fleshy and horny parts of animals, is, that when you want a quick and short action of manure, to use the fleshy and fluid parts: where you want a more slow and permanent action, to commence and long last after the first is over, to use the dryer and harder parts.

If now we turn to the other division of mould, that from vegetables, we find it lacking in the very thing which was superabundant in animal mould. That thing is volatile alkali. The great mass of vegetable mould is always impregnated, but always slightly charged with volatile alkali. There is not enough of the flesh and blood-forming element in vegetables to hasten the decay of vegetable matter, or to convert them after decay into rich manure. Now here, again, not science, but practical common sense steps in, and did step in long ago, and as she taught mankind the necessity of adding soil or mould to the decaying animal matter, so here, to enrich vegetable mould, she teaches that animal matter, or that which is its representative, alkaline salts, must be added to vegetable mould, to make it active. It is not the mould alone which plants want. We have seen all along how nature provides a certain amount of salts in her virgin mould: we, by cropping, exhaust these faster than the mould. We have tons of that, yet our fields are barren. They want, as has been explained, salts.

And now, reader, having been brought by this course of reasoning, to what the mould wants, (i. e. salts,) consider what tons and tons of useless mould you have in your swamp muck and peat bogs, your bassocks, and your turfy meadows. All these, foot upon foot in depth as they lie, are truly vegetable mould, in a greater or less degree of decay. If you dig this up, and expose it to the air, that itself sets it to work, decay is hastened, volatile matters escape, yea, ammonia, the master-spirit among manures, is secretly forming and at work, warming and sweetening the cold and sour muck. Without further preparation, practice confirms what theory teaches, that this process alone furnishes from these beds of vegetable mould, a very good manure. It is already highly charged with all the salts which a plant wants. But experience, doubtless led by the light of the good results of mixing mould with animal matter to preserve its strength, has also reversed the practice, and taught the utility of adding to vegetable mould quickening salts; that is, either the volatile alkali, by composting the mould with stable manure, or alkali in the shape of ashes, or potash, or soda-ash, or lime, or a mixture of these. In fact, whatever substance can, by putrefaction, give off volatile alkali, will, and must, and does, convert vegetable mould, of itself dead and inactive, into a quick and fertilizing manure.

If, then, reader, you pause here a moment upon this fact, and then cast your eye backward over the principles we have endeavored to impress on your memory, you will perceive that there is not, among all the classes and kinds of manure which we have shown you, one which may not be added, or, as is the phrase, composted, with peat, meadow-mud, swamp-muck, pond-mud, or by whatever other name these great storehouses of vegetable matter are called. These are the true sources of abundant manure, to all whose stock of cattle, &c., is too small to give manure enough for the farmer's use.

It is the farmer's business to make a choice, (if he has any but Hobson's,) of what substance or mixture of substances he will use. We have shown him how small a portion of animal matter, one to ten of pure mould, will impregnate that substance. Taking, then, a cord of this swamp muck, we shall find it contains in round numbers, about one thousand pounds of real dry vegetable mould. So that the carcass of an animal, weighing one hundred pounds, evenly and well mixed up with a cord of fresh dug muck, will make a cord of manure, containing all the elements, and their amount too, of a cord of dung.

But it is not from the carcasses of animals that the farmer expects to derive the quickening salts for his muck. This can be the source of that power only to the butchers, (what fat lands they all have!) or to the dwellers near the sea, where fish are plenty. A barrel of alewives, it is said, fertilizes a wagon-load of loam. The carcass of a horse converts and fertilizes five or six cords of swamp muck. A cord of clear stable dung changes two cords of this same muck into a manure as rich and durable as stable manure itself. These are all the results, reader, of actual practice. The explanation of the principle has only come in since the practice, and showed the how and the why of this action.

But the merit of explaining this action, would be, is nothing, if it had not conducted one step further. The explanation of the principle of the action of animal matters, animal manures of all kinds, whether solid or liquid, on muck or peat, has led chemistry to propose, where these cheap and common forms of quickening power are not to be had, to mix ashes, or potash, or soda-ash with swamp muck. Now, reader, this is not an idle, visionary, book-farming scheme. It is perhaps one of the few successful direct applications of chemistry to farming, which speaks out in defence of such book-farming, in tones and terms which bespeak your favorable consideration for the attempt which science is making to lend you, reader, a helping hand. This proposal, the offspring of science, has been carried out successfully by practical men in our own country, and has made its way abroad. Though this is not the place to give you the details of their results, you may rely upon the fact, that alkali and swamp muck do form a manure, cord for cord, in all soils, equal to stable dung.

Well now, after your patience in going over these pages, I hope you will find your reward in this statement. To be sure, it might have been said at once, and so have done with it; but I hoped, reader, and I am sure I have not been disappointed, that you liked to dive a little into the reason of things, and felt that you had farmed too long by the rule of thumb, to be satisfied that it was the road either to improvement or profit. And so among your first attempts at improving your worn-out lands, always supposing you have not a barn-cellar, hogs, and swamp-muck, so aptly called by one of your own self-made practical men, the "farmer's locomotive," I presume you may like to know the proportions in which you may mix swamp-muck and alkali. You can hardly go wrong here by using too much; the greater danger is, you will use too little alkali. But calculating on the proportion of mould in fresh-dug swamp-muck, or peat, it may be stated as a rule, grounded on the quantity of quickening power in a cord of stable manure, that every cord of swamp-muck requires eight bushels of common ashes, or thirty pounds of common potash, or twenty pounds of white or soda-ash, to convert it into manure equal, cord for cord, to that from your stable. Dig up your peat in the fall, let it lay over winter to fall to powder, calculate your quantity when

fresh dug, and allow nothing for shrinking in the spring; when your alkali is to be well mixed in with the mould, and, after shoveling over for a few weeks, use it as you would stable manure.

These quantities of ashes and alkali are the lowest which may be advised. Three or four times this amount may be used with advantage, but both the quantity of alkali and the number of loads per acre, must and will be determined by each for himself. It is a question of ways and means, rather than of practice. But supposing the smallest quantity of ashes or of alkali to be used, which we have advised, then at least five cords of the compost should be used per acre. This may be applied to any soil, light or heavy. But there is another form of this same swamp-muck and alkali, which should be used only on light, loamy, sandy soils, to produce its greatest benefit, though even on heavy soils, if not very wet, it may be used with great advantage. This is a compost of one cord of spent ashes to three cords of swamp-muck. This is decidedly the best mixture which has yet been tried. We have in this all that mixture of various salts and mould which plants want, and both by the action of the mould and by that of the air, the alkali of the spent ashes, which no leaching would extract, is soon let loose, and produces all the effects of so much clear potash or soda.

I have thus, reader, given you a few of the ways by which you may convert your peat-bogs and swamps into manure, when you have neither cattle nor hogs. I have not thought it worth while to go into this subject further, and give you directions for lime and salt, or other matters which might be used. I have given you the most common, and those well known and at hand. All you want, then, to apply these principles of forming composts, is to give them that little attention which will enable you to understand them. And the rest must be left to your practical common sense, without some share of which, farming, like everything else, would be vanity and vexation of spirit.

I would here, reader, take my leave of you, and in the hope that we may again meet to have another talk. There are a great many other points relating to manure, which can be understood only after we have made ourselves somewhat acquainted with the chemistry of soil. Then, having explained that, before the full action of manure can be understood, we must proceed a step further, and consider what changes take place in growing crops, and the effects of these growing crops upon soil and manure. The quantity and kind of salts they extract, and how soil is exhausted. This would lead to the consideration of the quantity and kind of manure to be applied to different soils, and the value of different manures. But there is one other important thing belonging to our subject. Crops exhaust land, but fatten animals. Now this last properly belongs to that part of our subject relating to the changes occurring in vegetables, and their power of exhausting the soil. It will be seen, therefore, that the whole covers the ground called Agricultural Chemistry.

This Essay is only its first part. If it meets your acceptance, I trust it may encourage its author to draw up its second part on soils, and its third part on the effect of crops on soil, and their value as food for animals.

From the New Farmers' Journal.

UTILITY OF GEESE TO THE FARMER.

It has been long remarked that cattle of all kinds are never unhealthy where geese are kept in any quantity; and the reason assigned is simply this, that geese consume with complete impunity, certain noxious weeds and grasses which taint, more or less, according to their abundance, the finest paddocks depastured by horses, bullocks, and sheep. Most farmers are aware of this, and in many places where the beeves appear sickly, geese are let into the pastures, and the soil where they tread is converted for the time being into a sort of infirmary.

From the [Columbia] South-Carolinian of June 6th.

OVERSEERS.

We seldom see communications in agricultural journals in reference to overseers. Yet overseers are most important characters in all planting operations, and it would be as much to the interest of planters to improve them, as to improve their lands, stock, or manner of planting. In fact more, for without improving them it is very difficult to effect any other improvement. Even with the best managers, most of the pleasure, if not profit of planting, depends on the character of the overseer. Planters may be divided into two great classes, viz: those who attend to their business, and those who do not. And this creates corresponding classes of overseers. The planter who does not manage his own business, must, of course, surrender every thing into the hands of his overseer. Such a planter usually rates the merits of the overseer exactly in proportion to the number of bags of cotton he makes, and of course the overseer cares for nothing but to make a large crop. To him it is of no consequence that the old hands are worked down, or the young ones overstrained; that the breeding women miscarry, and the sucklers lose their children; that the mules are broken down, the plantation tools destroyed, the stock neglected, and the lands ruined. So that he has the requisite number of cotton bags, all is overlooked; he is re-employed at an advanced salary, and his reputation increased. Every body knows that by such a course a crop may be increased by the most inferior overseer, in any given year, unless his predecessors have so entirely exhausted the resources of the plantation, that there is no part of the capital left which can be wrought up into current income. And this seldom happens, for such planters usually allow their overseers or other agents to purchase freely what is wanted, so that most losses are repaired—at their cost, to be sure; but they keep no accounts, and never think of expenses. The amount of their reasoning on the subject, is, *that a good crop has been made, and therefore they must be prospering.* And so they go on to their ruin. But they have previously ruined many who might have been fine overseers. Having once had the sole management of a plantation, and imbibed the idea that the only test of good planting is to make a large crop of cotton, an overseer becomes worthless. He will no longer obey orders; he will not stoop to details; he scorns all improvements, and will not adopt any other plan of planting, than simply to work lands, negroes and mules to the top of their bent, which necessarily proves fatal to every employer who will allow it.

It seems scarcely credible, that any man owning a plantation, will so abandon it and his people on it, entirely to a hireling, no matter what his confidence in him is. Yet there are numbers who do it habitually; and I have even known overseers to stipulate that their employers should not give any order, nor interfere in any way with their management of the plantation. There are also some proprietors of considerable property and pretension to being planters, who give their overseer a proportion of the crop for his wages; thus bribing him by the strongest inducements of self-interest, to overstrain and work down every thing committed to his charge. The number, however, of those planters who resign themselves and other property to the tender mercies of their overseers, is rapidly diminishing, partly by their being compelled to sell out, and partly by the impulse which the times have given to agricultural improvement. It is beginning to be distinctly understood, that planting is a profession by which no one can thrive, who does not understand and diligently pursue it; that, in fact, it is a *science*, intimately connected with, and requiring for its full investigation and application, a knowledge of almost all other sciences. And I am happy to add, that no science has advanced more rapidly, within the last ten years, or seems more likely to advance hereafter. Long as agriculture has been practised, it is yet in its infancy, as regards its perfection; and no field opens a wider sphere for genius, or affords a higher promise of fame, than the study and practice of it on scientific principles.

But here, again, we encounter the difficulty of overseers. Few of that large and increasing class of planters who manage their own business, can dispense with agents and sub-agents. It is impossible, on a plantation of any size, for the proprietor to attend to all the details, many of which are irksome and laborious, and he requires more intelligence to assist him, than slaves usually possess. To him, therefore, a good overseer is a blessing. But an overseer who would answer the views of such a planter is most difficult to find. The men engaged in that occupation who combine the most intelligence, industry and character, are allured into the service of those who place all power in their hands, and are ultimately spoiled. He is (or rather was, for there is a manifest change going on) esteemed but a second-rate man among his fellows, who will condescend to take orders from his employer, and manage according to the system of another person. And until this idea is *wholly eradicated*, and the real intelligence of the country, and the true owners of its wealth, can control its agriculture in the minutest details, the advance of improvement must be seriously clogged. What could be done in war, if the orders of the General in Chief were not scrupulously obeyed, from the second in command, through every grade, to the soldier in the ranks? So it is in planting. The planter must understand his business, and he must have agents to carry out his views, from the pitching of his crop to the weaning of a pig. I therefore set it down as the first requisite of a *good overseer*, to OBEY ORDERS: not resistingly, sullenly, and with a protest; but cheerfully, promptly, and with a full comprehension of their spirit, and desire for their success. An overseer who does this much, is worth having, though he may possess more than an average share of the faults of his class. Let him, if he wishes, give his opinion freely, and his reasons for it; but the matter once decided, let him abide firmly, and in good faith, by the old adage, "obey orders, if you break owners."

The next requisite of an overseer, is capacity to understand and execute orders in the proper manner. Without this, of course, his best intentions will not avail you.

The duties of an overseer acting under the orders of his employer, are, first, to attend to the proper management of the negroes; to see that the tasks allotted them, are such as they can perform with reasonable industry; and to take care that they do perform them, and do it properly. The employer should regulate the tasks himself, in the main, and examine the work; but there are a great many details to which he cannot look, and in which the overseer himself will require assistants among the laborers. The overseer should attend punctually to the sick, giving medicine in strict conformity to directions; and, in the absence of the employer and physician, should be capable of using judiciously simple remedies himself. He should cheer and encourage the sick. He should especially take care of the old, the young, and the complaining, for the treatment of whom his employer has, of course, a system suited to his general plantation operations. And lastly, in reference to the management of negroes, it is the duty of the overseer to enforce discipline and subordination, and with as little and as mild punishment as possible. The overseer whose constant and only resort is to the lash, and who expects to remedy by that all the malpractices which he should by his foresight and attention have prevented, is a brute, and deserves the penitentiary.

The second leading duty of an overseer, is to carry the keys of the plantation, and to feel himself wholly responsible for everything upon it. Few negroes, however well disposed, have firmness to resist temptation. It should be placed as little as possible in their way; and they should not be allowed, if it can be avoided, to turn a key. If they are honest, keep them so.

If the overseer cannot see *every* mule fed—as he should do, if possible—he should at least give out all the feed himself, and take measures to be assured that it is applied as directed. This is his especial duty, and one that few employers can ever assist him in; and an overseer who will rigidly perform it, may always save his wages for his employer. Numbers waste many times the amount of them, by sheer neglect in this particular.

The third essential duty of an overseer, is to take care of the stock and tools of the plantation. And here the employer has to rely mainly on him. Whether the work-animals and tools in use are in good condition, the employer can readily perceive; but when they get out of order, he can only give general directions for the most part, which it is the business of the overseer to carry out in detail. So with the cattle and hogs; the overseer is charged with having them fed, and counting them, and accounting for the missing.

If the negroes are well managed, the keys safely handled, and the stock and tools properly taken care of by an overseer, all in accordance with the views and orders of his employer, I pronounce him a good overseer, and should like to employ him, *though his crop should fail utterly* —that is, if he obeyed orders, in managing it. Crops will fail, from bad seasons, bad management, and poor land. For none of these things is an overseer, acting in his proper sphere, at all responsible. God gives the seasons; the employer pitches his crop, plants it, and directs the manner of working it; furnishes the hands, mules and utensils; and has bought poor land, or wilfully allows it to remain so. The overseer is not to blame, *if he has obeyed orders.* The planter who does not himself select the land for planting, and regulate the extent of it properly, according to his force; and who does not adapt his plows and hoes, and systematize his working, according to his soil, is not fit for his business, and should give it up. I had almost said, the planter who does not rest or manure his land, so as to improve it, and carry on a scheme of experiments in planting, should do the same. But it has not come to that yet, though it soon will.

In doing this part, however, let the employer consult his overseer, and treat his opinions respectfully, if he does not adopt them. He will learn much from him; and much also will be learned, sometimes, by consulting his most intelligent negroes. They are often good planters; but he must decide, and do it fully, taking clearly on himself the responsibility, and exacting thorough obedience.

In general, overseers are violently opposed to everything that is new to them in agriculture. The reason is, they are for the most part wholly uninformed in the science of agriculture, and deficient of correct reasoning on the principles of vegetation, the character of soils and manures, and the influence of air, heat and moisture. Their hints are often valuable; their arguments rarely; for where the conclusions of an ignorant planter are just, in three cases out of four his reasoning has been false. And how can it be otherwise, when to understand the simplest process in vegetation, requires a tolerable knowledge of Chemistry, Geology, and Botany? A good overseer will readily engage in every experiment which his employer proposes. If it fails through his neglect, he deserves a discharge at least.

It will be seen that I do not mention being a good planter as one of the requisites of a good overseer. If he could have all the requisites I have enumerated, and did not know cotton from corn, I should not object to him. Save me from an overseer who is what is called "a good planter," with his obstinacy and self-conceit. You have first to unlearn him all he knows, before you can teach him anything. Some knowledge of the art may be valuable, in the employer's absence; but an employer should never be absent longer than he can give orders for the management of the crop, from planting to laying by. As to the idea of planting successfully, and being at any considerable distance from one's plantation; or leaving it for any considerable time, that is an absurdity of which all who have tried it are, I imagine, thoroughly convinced.

In conclusion, let me recommend the only two measures I think practicable, in conducing to the improvement of overseers. Let all those *pseudo* planters who neither understand nor attend to their business, abandon it, and allow the *real* planters the opportunity of selecting from the overseers of the country. It will be to the advantage of all concerned. Then let the *real* planters exact implicit obedience to orders; take their own responsibilities on their own shoulders; and require of their overseers the performance of their proper duties—those duties only, but those thoroughly.

I fear I have exhausted the patience of your readers with this long, rambling article. But I have not exhausted the subject. It is one of deep interest, and demands the attention of all engaged in agriculture. With your leave I may recur to it again. FRANKLIN.

REPORT ON INDIAN CORN.

To the Editor of the Southern Agriculturist:

DEAR SIR—At a meeting of the Agricultural Society of South Carolina, on Tuesday, the 18th inst., the accompanying report was read and accepted, and by resolution directed to be handed to the Editor of the Southern Agriculturist for publication.

Very respectfully yours,
JOS. F. O'HEAR, *Recording Sec'y.*
Charleston, June 19th, 1844.

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Your Committee on Indian Corn, beg leave to report;—We consider the corn crop as second to no other crop made in the United States; and in this State, the advantage of raising our own supplies would be of great importance, and would save to the State a large sum of money spent annually for corn. Under these circumstances, any improvements in planting, or cultivating this valuable grain, must be interesting. By a judicious use of the plow, and other good management, the crop may be much increased, and in a few years, a full supply for the State might be expected.

In the years 1838 and '39, about 500,000 bushels of corn was imported. From October, 1841, to October, 1842, 360,000; and from October, 1842, to October, 1842, 260,000; showing an increase of the crop of the State, of 100,000 bushels in one year. This increase may be attributed to the efforts made by Mr. Ruffin and others, in recommending marl and other manures, and the proper use of plows.

All plants derive their nourishment from air, water and soil, and the corn plant must have a supply of air and moisture to effect a full development of its growth; and the soil, to do its part, must be well manured and cultivated.

Where the land has been long planted, there is frequently a hard subsoil crust, which must be well broken up by the subsoil plow, to enable the perpendicular roots to penetrate deep into the earth, to obtain moisture for the plant.

In preparing land for a corn crop, we would recommend that in the early part of the winter, a furrow of six or eight inches deep should be made with the common plow; that the subsoil plow should be run in this furrow to the additional depth of ten or twelve inches, and that cornstalks and other manure should be put in this trench, and listed in, when thoroughly wet, with a small plow or hoe, as may be convenient; the land to remain in this state to the period of planting.

We cannot too highly recommend the use of the subsoil plow. By its use the soil will be less wet after great rains, and more moist in great drouth. Mr. Delaplain informs us, that in 1823 he planted a field of 25 acres of corn; that in a part of this field he used the subsoil plow, and in the other part the common tillage. A furrow was made with the common bar share-plow, five or six inches deep, and with the subsoil plow seven inches deeper; that in all other respects, the soil, planting and tillage was the same. In that part of the field where the subsoiler was used, the corn kept its color throughout the season, and produced 50 per centum more than the other. And where the common tillage was used, it suffered much from drouth, and fired considerably.

Mr. C. M. Bement also states that he subsoiled a part of a piece of ground which he planted in Indian corn. The piece of ground was on a light loamy, or sandy knoll. That he subsoiled it in strips, leaving alternate strips not subsoiled, all being manured alike: he ran the subsoiler from eight to ten inches deep. The season proved to be very dry, and where the subsoil plow was not used, the corn was so burnt up that it produced nothing; but where it was used, the corn remained green and flourishing through all the drouth, and produced a good crop.

By the use of the subsoil plow in England, the crop of corn has been increased to an incredible degree, frequently doubled, and in many instances trebled.

The best time for planting corn is about the middle of March. The soil must be moist at the time of planting, or a good stand cannot be expected. The seed corn ought to have been selected with care in the field from those stalks bearing the greatest number of ears. And here we would recommend in the highest terms the use of the coal-tar, to preserve the seed from birds, &c. When the seed is well prepared by the use of coal-tar and soot, and the soil well moistened by a good rain, to be planted at the distance of three feet, the rows being from five to six feet apart; and either one, or two stalks should be left, according to the fertility of the soil. Where the soil is very rich, or highly manured, we think it best to plant at two feet apart, and to leave two stalks.

As soon as the corn is up, the plow ought to be used in breaking up and pulverizing the earth between the rows, and when five or six inches high, the best plowman ought to run a furrow as near as possible to the plant, the bar side of the plow being next to it, and the other plowmen may break up the intermediate space between the rows. At this period the plowing ought to be deep and close, breaking up, and pulverizing well the soil. By porosity of soil, the air is admitted, and a larger quantity of organic and inorganic food for the plant, is afforded.

In dry weather the oftener the plow is used the better, until the corn is about one third grown, after which, the plow ought to be laid aside, and the cultivator or hoe-harrow used in its place. In wet weather the plow ought never to be used. Corn is benefitted at all periods of its growth, by the application of manure on the surface, over the roots. If the drouth is great, and the corn far advanced towards maturity, the surface crust must be broken, and the earth frequently stirred lightly to admit air and moisture to the roots, but care must be had not to disturb or cut the lateral, or surface roots.

About the time corn is maturing, brace roots shoot out from the joints near the surface of the earth. These roots frequently strike deep into the earth, affording both nourishment and support to the plant. If a high hill has been made, these roots shoot out higher upon the stalk where it is brittle, and likely to be snapped off the first high wind. If there be little or no hilling, the corn would bend and yield to the storm, and rise again, having sustained little, or no injury. This would be particularly the case, where the soil is very fertile, and highly cultivated.

Well grown corn has from forty to sixty large roots extending from the joints under the ground, which, with the tap-root, penetrate deep into the soil, if not obstructed by a hard subsoil. From these large roots innumerable small fibrous roots shoot out in all directions towards the surface, extending across the rows five or six feet, in search of nourishment for the plant. The large perpendicular roots afford moisture, and the small fibrous roots, food to the plant. The deeper the perpendicular roots penetrate the soil, the less injury the plant will sustain from

drouth. And the more the surface has been broken up and pulverized, the further the surface roots will extend in search of nourishment, to mature fine and large ears. We would here recommend, that the corn should not be turned down too soon, by which error, the quality of the corn is frequently much injured.

JOHN H. TUCKER, Chairman.

June 18th, 1841.

From the Farmer's Cabinet.

TREATMENT OF SICK ANIMALS.

There are many erroneous notions prevalent in the community, respecting injured or diseased domestic animals, and such unnatural or injurious practices as a consequence of these incorrect views, that no apology is necessary for an attempt to subserve the cause and interest of these useful creatures which, if they had tongues to speak, would tell sad tales of the wrongs to which they have been, and still are, too often subject.

We do not propose to give an essay on the particular cases that require attention—our object is rather very briefly to ask the owners of domestic animals to be guided by a few correct principles, which are applicable to nearly all cases, and which will at least prevent us from doing harm, and be the means, probably, of doing much good.

In the first place, then, we would insist that when an animal is well he never requires any medicine; and when he is sick, we would protest against his being dosed with articles that are said to be 'good' for a particular disease, without any reference to its violence or the symptoms, as common sense would dictate, that remedies the most opposite in their character and effects, may be equally advantageous in different periods of the case.

Always distrust a man and the remedy, when your friend declares that an article is *always good*, or *a certain cure* for a disease, without reference to its symptoms—prescribing for the name of the disease itself—this is the very essence of quackery, in man or beast.

A large portion of the diseases of animals closely resemble those of the human family, and require a treatment conducted upon the same general principles—with some variations and some peculiarities, it is true; but none of those outrageous departures from common sense, which are too frequently witnessed.

A horse with pleurisy, or inflammation in the lungs, or apoplexy, requires a widely different treatment from one with cholic or worms There is no more mystery about the disease of a horse or an ox than about those of a man, and a violation of natural laws is as productive of pain and injury in one as in the other.

There is too great a propensity, everywhere, to resort to active treatment in all cases—a feeling that is encouraged by the ignorant or designing for selfish purposes. An adviser in sickness is often most useful, and shows most skill, where he only tells us what is to be avoided and waits for indications for more active measures—doing little more than preventing ignorant but well-meaning persons from interfering with the salutary and useful changes that may be going on.

Remember that there is a restorative power in nature, to which it is always better to trust, than to direct active remedies without knowing for what particular purpose they are given.

There is never occasion for the administration of the disgusting combinations which the poor animal is made to swallow, from the mere whim of an ignorant horse or cow-doctor. Many a fine beast has been lost by his owner trusting to such prescriptions.

When your animal has fever, nature would dictate that all stimulating articles of diet or medicine should be avoided. Bleeding may be necessary to reduce the force of the circulation—purging, to remove irritating substances from the bowels—moist, light, and easily digested food, that his weakened digestion may not be oppressed—cool drinks, to allay his thirst, and to some extent, compensate for diminished secretions—rest and quiet, to prevent undue excitement in his system, and so on through the whole catalogue of diseases—but nothing to be done without a reason. Carry out this principle, and you will probably do much good—hardly great harm; go on any other, and your measures are more likely to be productive of injury than benefit. But as we have before said, our object now is not to speak of diseases in detail; it is rather to encourage our agricultural friends to *think* before they *act*; to have a reason that will bear examination for every step in the management of a sick or injured animal: to remember they have a powerful assistant in *nature*, (being fairly used,) and that specifics, as they are called, are much fewer and less to be trusted, than their proprietors would have us believe.

We might, indeed, almost sum up what we would desire, in one general direction of five words:—TREAT YOUR BRUTES LIKE MEN.

From the Western Cultivator.

COUNTRY LIFE.

"God made the country, and man made the town."—*Cowper.*

At this season of the year, when Nature has resumed her beautiful attire, and decked her awful aspect with the radiant smiles of gracefulness and love, how much ought he to felicitate himself, who has early cultivated her acquaintance, and is now her well-tried and chosen companion. His solitary walks, amid her old familiar scenes, are fraught with light to his soul. With the prospect of woods, and meadows, and flowers, and "every green thing," with the voices of winds and waters, old pleasant memories throng into his heart, and noble aspirations start to life, adding a glory to his future hopes.

What farmer's boy has not dwelt with rapturous delight on the hallowed associations of his childhood; or his labors in the field, and his rambles in the woods, or his every day sports, and his holyday glory; his mimic mill-dams, and stupendous domes, scarcely inferior to the Emperor of Li'lipot's palace; his excursions after wild plums and black haws, not to mention walnuts and hickory nuts; the incomparable exploits of the sugar-making season; his school-boy days, and all those things which he knows so well, yet cannot find words to describe, even to himself. It is really a melancholy thought, that the happiest period of our lives, (as we afterwards clearly discern,) flies away ere we are sensible of its priceless enjoyments.

I do not make pretensions to any uncommon enthusiasm in regard to these matters, nor am I at all indisposed towards looking with sanguine hopes into the future; yet I certainly would not resign the pleasing memory of the past, for all my future hopes of this world. As the days of my boyhood are verging to their close, I hope I shall find indulgence in regretting the everlasting departure of that delightful season. I intend, as the last act of my boyish life, to write a tribute to those golden hours of thoughtless content and unmingled happiness.

It is in this spirit that I delight in the associations which the season calls forth. Even the wilderness of uncultivated and unadorned nature awakens pleasing emotions. The tall poke-weed by the highway side, the white blossomed elder, the wild rose, and plum, and apple tree, the willow overhanging the stream,—all these have an inexpressible charm. They lead back our thoughts to the time when "the unpruned forest" waved over this fair country, and caused us to reverence the memory of those iron men who made the wilderness blossom as the rose, as the heritage of their posterity.

While thinking of this subject, I will make a suggestion which has often occurred to me concerning the planting of trees. Every spot of ground unfit for cultivation, should be planted with a useful or ornamental tree or shrub. There is no occupation more pleasing, healthful and innocent. And setting aside all other advantages, it would greatly add to the beauty and moral appearance of the country.

But to return. It has often struck me, at first thought, in viewing a populous town, as something bordering on the ridiculous, that men should huddle together amidst noise and filth and confusion, carefully economising the paltry space, while Nature's boundless domain, rich in all her most precious gifts, opens a *free range* around:

"Pure flows the limped stream in crystal tides,
Thro' rocks, thro' dens, and ever verdant vales,
Till to the town's unhallowed wall it glides,
Where all its purity and lustre fails."

I have no spite against towns or their inhabitants, yet I can appreciate the feelings with which a backwoodsman would survey these little things of man's contrivance—the theatre of his vanity; the feelings which caused Daniel Boone to loathe the effeminate train which followed in his footsteps, and sickened his great soul with the bitterness of human pride. I can truly say, with regard to divers little villages within my knowledge, that if the ground they occupy was devoted to cultivation, it would greatly improve the aspect of the country and the morals of the inhabitants. There is something in a city life which contracts the mind, and unfits it for the contemplation of the beautiful and grand in creation. The greatest men of our country and of the world were NOT born and bred in cities. Very seldom have they furnished the world with a George Washington, or a Robert Bruce; such *plants* requires a better *soil*. Like the oak "monarch of the hills," they rise proudly from the soil, until their boughs spread broad and high in the face of Heaven, and the tempest assails them in vain.

Let us rejoice, my honest, sturdy, independent brethren of the plow, that our lot has been cast in circumstances so highly favorable to health, virtue, and prosperity; and we will bless the memory of our fathers for bequeathing to us this legacy of freedom and happiness. There is no human dignity superior to yours, and no other country on earth in which talents and virtuous independence find so congenial an atmosphere. If you have learned to view things in this their true light, you will never give way to a repining spirit, nor look with longing eyes on the charms of wealth and state; and, least of all, upon those callings brought forth and nourished by ignorance, for the support of idleness and knavery. The proudest votaries of ambition have in every age paid a silent but expressive tribute to the surpassing dignity of rural life, in finally courting retirement, the spontaneous and innocent pleasures which it affords. Wisely did they act, when wearied with the unsubstantial vagaries of the world, and the vanity of popular applause, in repairing to that living fountain of bliss vouchsafed by Providence to the restless children of men; but wiser had been their course, had their footsteps never strayed from the flowery banks of its refreshing waters:

"For the calm comforts of an easy mind,
In yonder lonely cot delight to dwell,
And leave the statesman for the lab'ring hind,
The regal palace for the lowly cell."

Wayne County, Indiana. ISAAC JULIAN.

ECONOMY.

M. SAY, the celebrated French writer on political economy, has the following story:

"Being in the country, I had an example of one of those small losses which a family is exposed to through negligence. From the want of a latch of small value, the wicket of a barn-yard, (looking to the fields,) was left open; every one who went through drew the door to, but having no means to fasten it, it re-opened. One day a fine pig got out and ran into the wood, and immediately all the world was after it; the gardener, the cook, dairy maid, all ran to recover the swine. The gardener got sight of him first, and jumping over a ditch to stop him, he sprained his ancle, and was confined a fortnight to the house. The cook, on her return, found all the linen she had left to dry by the fire burned; and the dairy maid having ran off before she tied the cows, one of them broke the leg of a colt in the stable. The gardener's lost time was worth

twenty crowns, valuing his pain at nothing; the linen burned, and the colt spoiled, were worth as much more. Here is a loss of forty crowns and much pain, and trouble, vexation and inconvenience, for the want of a latch which would only cost three pence; and this loss, through careless neglect, falls on a family little able to support it.

BARBOUR COUNTY AGRICULTURAL SOCIETY.

A regular meeting of the Barbour county Agricultural Society, attended by a numerous audience, both of ladies and gentlemen, was held at Glennville on the 29th ult.—the President, Col. John L. Hunter, in the Chair—the Secretary being absent, D. M. Seals was requested to act as Secretary *pro tem.*

The President, in accordance with the provisions of the laws of the Society, delivered a regular address; in which, among other topics of interest to the farmers, he brought to the notice of the Society, the new and improved system of producing manure: for the process, fertilizing qualities, &c., of the same, he referred to and read extracts from the Southern Cultivator. He also directed the attention of the farmers to the improved mode of raising the sweet potato and Indian Pea plant.

At the close of his remarks, Col. McDonald, Ex-President of the Society, was called for, and responded in his usual felicitons and eloquent style,—making a stirring appeal to his brethren of the Agricultural fraternity, in behalf of a scientific system of agriculture, as the only means of rescuing the new lands from waste, and of restoring their old lands to their former vigor and productiveness. He alluded to the ladies, in complimentary notice of the benefits which would accrue to the cause from their zealous co-operation. He concluded his remarks by a happy reference to Horticulture, as being in close connection with Agriculture, and warmly recommended to the fair ladies of Glennville, the formation of a Horticultural Society.

Mr. Bobo, from South Carolina, being present, was requested to address the Society, to which he replied in some *very interesting and practical remarks.*

In compliance with the wishes of the Society, the Rev. Sereno Taylor delivered a short and interesting lecture upon the subject of Meteorology, and read from a diary of the past season, kept by himself.

Col. Alexander McDonald offered the following resolution, which was adopted:

Whereas, a State Agricultural Society has been regularly organized, and a statue passed by the Legislature of Alabama; and whereas, we believe much good to the farming interest of our State would result from a lively regard being had by the farmers generally, in the State Agricultural, as well as in the county societies. Be it, therefore,

Resolved, That we, as members of the Barbour County Agricultural Society, feeling a strong desire for the prosperity of the State Society, will do all in our power to keep alive so important and valuable an institution, by preparing and forwarding from time to time, reports of the state of the crops, within the bounds of our society; and will exert all other possible means for the advancement of the cause of the State society, and that we now call on our brother farmers throughout the State, to join in so laudable an object. And we suggest to the officers of the State Society to make arrangements for holding an Agricultural Fair, at least once a year; and that we respectfully request the Southern Shield, and all other papers in the State friendly to Agriculture, to publish the above resolution.

Col. McDonald then offered the following, which was also adopted:

Whereas, much good would accrue to the cause of Agriculture in the county of Barbour, by frequent meetings of the farmers, so as to enable them to discuss many important subjects relating to Agriculture, and as there is not time for such purposes at the quarterly meeting of the Society, be it, therefore,

Resolved, That a Farmers' Club be established at Glennville and one at Eufaula, which shall hold monthly sessions for the purpose of discussing such subjects as refer alone to Agriculture, Horticulture and Mechanic arts.

A resolution was then passed, requiring the President to appoint committees from the various sections of the county embraced by the society, whose duty it shall be to examine and report to the society the state of the crops in their respective portions of the county. The names composing the above committee to be published hereafter.

The meeting then adjourned.

JOHN L. HUNTER, Pres't.

D. M. SEALS, *Sec. pro tem.*

From the Western Cultivator.

THE YOUNG FARMER'S CATECHISM.

It is my wish, in the following series of questions and answers, to be intelligible. I shall, therefore, endeavor to write with as much plainness as the subject will admit; and if there are any who may consider these essays to please and instruct, worthy their attention, who require further elucidation of any parts of the catechism, I will, upon notice given in the Cultivator, endeavor to supply their wants. Writing, as I do, under many embarrassments, and in haste, I may not always treat the subjects as pertinently as they deserve, nor as lucidly; it is for this reason I make the foregoing offer,—of which I hope the young, interested farmer, will avail himself, if he should find it necessary. Don't be alarmed at a few terms which may be new to you, and call them hard words; the simplest words were once hard to the infant; the hardest words may become plain to you. Endeavor to understand them. There is no business which is not prosecuted with more alacrity, when the principles by which it is conducted are understood.

COMPOSITION OF PLANTS.

1. What are plants composed of? All plants consist of one or more of the following elements: carbon, oxygen, hydrogen, nitrogen, chlorine, iron, iodine, lime, magnesia, manganese potash, phosphorus, silex, soda and sulphur.

2. I know that carbon or charcoal exists in plants; for it is the result of the partial combustion of wood, which leaves the coals or carbon on our hearths: I know that the four next named constituents are gases or air; and I know that potash exists in plants, for we obtain it from the ashes. But what evidence is there that the other substances enter into the composition of vegetables? Chemists have analyzed the ashes of numerous plants; and have proved conclusively that the elements referred to, exist in them. Iodine is procured from sea-weed, and is a valuable medicine. Soda is likewise manufactured from the ashes of marine plants. Silex or pure flint may be seen on the outside of scouring rushes, cornstalks, ratan, and other hard-surfaced plants. It is so abundant in some, that fire has been elicited by striking two pieces together. While traveling on the Grand Prairie some years ago, I obtained a considerable mass of sulphur, resulting from the combustion of a haystack set on fire by lightning.

3. Admitting that all these substances exist in plants; how can we account for the presence of gum, and India rubber, the various fixed and volatile oils, rosin, starch, sugar, wax and numerous acids?—These are all compounds, consisting wholly of carbon, oxygen, hydrogen and nitrogen; principally of the first three, very numerous as the substances are, which are found in vegetables; they are all formed, wood, gum, sugar, acids, and every thing else, out of the few elementary principles named in the first answer.

4. What! all this variety of substance, the bitter and the sweet, the sour, the tasteless, the acrid, the nutritious, the poisonous,—all these properties, the result of the combination of the same elements! How is it possible for these contradictory virtues to arise out of the union of the same principle? The difference in these substances depends solely upon the principles being united in different *proportions.* A very interesting instance of the wonderful effects of changing the proportions of the constituents of a chemical body exists in the combination of oxygen and nitrogen: these gases mixed together in a certain proportion form the atmosphere, or air which sustains the whole living creation; combine with the nitrogen a larger proportion of oxygen, and we produce the exhilerating gas, with the ludicrous effects of which, when breathed, many are familiar. increase the proportion of oxygen, and the result will be an irrespirable gas; and still another proportion of oxygen, and a weak acid will be produced: add more, and a stronger acid will be made: add still more, and we shall have the powerful acid called aquafortis! What a contrast is seen in the two extremes! At one end of the series of combinations* stands the life sustaining atmosphere: at the other, the deadly aquafortis! So in the vegetable kingdom, we shall find a variation in the proportion of a few of the elementary principles named in the first answer, produce the most marvellous difference in the products.

5. If these few elementary substances constitute all plants and all the products of plants, it is evident that the plants must be supplied with them in some manner. Whence are these substances then obtained? From the earth and from the atmosphere.

6. But do these principles exist in all parts of the earth and atmosphere?—The atmosphere being a fluid mass, is constantly in motion: and the wind which is now passing by us, is carrying the fertilizing matters with which it may be charged, into other regions; and thus the exhalations from the earth are mixed with great uniformity, with the air. But it is not so with the earth: there are many parts of it which are wholly deficient in some of these principles; and as there is no natural, universal blending of earth from all parts of the globe, producing a uniform mixture of the soil, the deficiency must be supplied by artificial means: and this constitutes an important part of the art of husbandry.

7. Then there must be land in which some plants will not grow, for want of some essential constituent. How can the quality of the soil be determined? By analysis or by cultivation. If any given plant as wheat, hemp or grass, flourishes on the soil, we know that all the necessary constituents of the plant exist in the soil. But if any of these principles are absent, the plant can no more thrive, than an animal can live without provender. It is then necessary to ascertain what constituents are lacking, and to furnish the soil with them. As different parts of plants are sometimes differently constituted, one part may grow luxuriantly and other parts be dwarfish or defective for want of its proper food. It is important, therefore, to consider what part of a plant fails, and then knowing the composition of that part, we may conjecture the defects of the soil and proceed to improve it with a prospect of success. It is possible, and not uncommon, for the stalk and leaves of wheat to grow exuberantly, while the grain is stinted in its development: or the grains may be perfect, and the leaves and stalk comparatively small.

Richmond, Ia. J. T. P.

STRAWBERRIES.—Great efforts are making in the western country to perfect the culture of the strawberry. Mr. Culberston, of Kentucky, residing on the banks of the Licking river, keeps 60 hands constantly employed in picking strawberries, and sends 125 bushels *daily* to the Cincinnati market. So says the Boston Transcript. (A large story, that.)

AN INDEPENDENT WOMAN.—Talk, indeed, of your pantomine and gaudy shows; your processions, and installations, and coronations! give me a beautiful sight, a neat and smart woman, heating her own oven, and setting her own bread! And if the bustle does make the sign of labor glisten on her brow, what man would not kiss that off, rather than lick the plaster from the cheek of a dutchess?—*Cobbett.*

*The atmosphere is, however, a mechanical mixture of the gases, not strictly a chemical combination.

WEDNESDAY, JULY 10, 1844.

POULTRY.

It is scarcely credible how valuable is the poultry in the United States. By the census of 1840, it was returned at $12,176,170. N. York contributes $2,373,529, which is more than the value of all its swine, hali the value of its sheep, the entire value of its neat cattle, and five times more than the value of all the horses and mules in the State. These facts are derived from a publication of Harper's, called the American Poultry Book.

CHEAP GIN-BAND.

A planter residing in the parish of Tensas, (says a Louisiana paper,) informs us that during the present ginning season, he has dispensed with the use of leather for gin-bands, substituting in its stead a band made of stout Lowell cotton. The strips are cut to the proper length and doubled four times, and require splicing but at one place, and are sewed with strong thread. It is superior to leather from the fact that it runs more slack and is materially lighter, and can be used at least two seasons: the saving in cost is alone sufficient to induce any one to try the experiment. We are assured of its success by the gentleman to whom we are indebted for the information.

A NEW SUBSOIL PLOW.

We saw, a few days since, says the Boston Cultivator, a subsoil plow of novel construction, designed and made by Capt. Chandler. It is well constructed for strength, for running steady and keeping its true position with very little labor of the plowman, and for a thorough and deep pulverization of the soil, with a moderate draught. It will run fifteen inches deep below the wake of another plow. He has subsoiled several acres with this plow, running from 12 to 15 inches deep after a common plow that went 6 inches deep. The soil was clayey, full of small stones, and now and then one of a good size. A team of three horses was amply sufficient, and some over an acre was plowed in a day, leaving the soil so light that it was difficult to walk on it.

☞The Cincinnati Atlas states that their market is bountifully supplied with strawberries, at 5 cents a quart, some of which measure from 4 to 5 inches in circumference.--Oh, our mouth!

☞A writer in the Tennessee Agriculturist, states that chickens or fowls fed with corn ground coarse, as for hominy, will never have the gapes.

☞Panes of glass may easily be removed by the application of soft soap for a few hours, however hard the putty has become.

For the Southern Cultivator.

CAMAK, GA., June 27th, 1844.

MR. EDITOR—As I do not recollect to have ever seen any remedy in your valuable paper for the blind staggers, I have thought proper to send a remedy which was never known to fail when applied in time.

For Blind Staggers.—First, bleed freely; then take 4 oz. of aloes, 1 oz. gum-myrrh, dissolve them in spirits and water, or spirits weakened with water: a quart of spirits is sufficient, and the same amount of water. When well dissolved, take about one-fourth the amount, and drench the animal, and continue to give it every fifteen or twenty minutes, until the animal is relieved.

Respectfully, &c.,

WM. H. EDWARDS.

TREATING CUCUMBER BUGS TO EGGS.

A writer in the Newburg (N. Y.) Telegraph says that he has found a way to save his cucumbers from the bug, (whether striped bug or any other, he does not say,) by giving them a good dinner of shad's eggs. They like fish eggs so much better than vegetables, that they leave the latter for the sake of eating the former. He had put some of the above material around some grape vines to increase their growth, and he thought he would apply some to his cucumbers, when lo! and behold! the bugs which had resisted all attempts to drive or choke them off, immediately left the vines and attached themselves to the fish offal.

Now, if fish eggs will lure them from mischief, we presume the fish itself would; and if fish, perhaps other animal matter would. We see but one objection to this course; that is this: it is not much of an object to raise bugs by feeding them high, and letting them go *scot* free, to come out in swarms another year to eat up your gardens, if there are no fish eggs spread for them.

NUTRITIVE PROPERTIES OF FLOUR.

A correspondent of the N. Y. Central Farmer gives the following statement of the nutritive qualities of the Flour of various countries:

I have noticed lately, some experiments which have been made in France, that seem to be important; at all events, they are interesting, and I think useful. The nutritive quality of flour has been ascertained by a French chemist, from a variety of samples which he has analysed, and the following is the result:

Nuremburgh bread is equivalent to	100.00
Dresden,	115.31
Berlin,	116.04
Canada flour,	117.23
Essex,	121.33
Glasgow unfermented bread,	123 15
Sothian flour,	134.06
U. S. flour,	145 03
U. S. flour by chemical analysis,	150.00

By this it will be seen that the U. S. flour is far the most nourishing of any in the world.

TO MAKE WATER COLD.

The following is a simple mode of rendering water almost as cold as ice:

Let the jar, pitcher, or vessel used for water, be surrounded with one or more folds of coarse cotton, to be constantly wet. The evaporation of the water will carry off the heat from the inside and reduce it to a freezing point. In India and other tropical regions, where ice cannot be procured, this is common. Let every mechanic or laborer have at his place of employment two pitchers thus provided, and with lids or covers; the one to contain water for drinking, the other for evaporation, and he can always have a supply of cold water in warm weather. Any person can test this by dipping a finger in water, and holding it in the air of a warm day; after doing this three or four times, he will find his finger uncomfortably cold.

Dr. Franklin recommends a young man, in the choice of a wife, to select from a *bunch*, giving as his reason that when there are many daughters, they improve each other, and from emulation acquire more accomplishments and know more, and do more, than a single child spoiled by paternal fondness.

The following article, on Farming in Connecticut, from the Albany Cultivator, will apply with equal force to many planters in Georgia:

FARMING IN CONNECTICUT.—Our friend "*Quercus*," after stating some of the difficulties and perplexities attendant on commencing farming operations on a soil which had been worn out by bad management, says:—"So the year has gone round—all the avails not counting 3 per cent. on any respectable estimate of the value of our 300 acres! This is not a fancy sketch. I can even count dozens in no better condition, from my window, now; but nine out of ten are mortgaged. None of their managers take the Cultivator, you may be sure. But how do they live? They sell a little wood, and burn coal, and live cheap, and buy nothing for money, and shoot foxes; starve their cattle and eat the carcass! But 'my man,' some bluff westerner wolud say, 'give away your land, (for I know it can't be sold,) and get you a bit of our unexhausted soil, and begin again.' It is the easiest thing in the world to give advice to those of whose circumstances you have no knowledge. Still if there were no circumstances in the way, I should be loth to think and act upon the thought, that a proper degree of energy and skill and foresight, will not spread fertility like a mantle, all over these rocky hills and these mossy meadows. Beside, there are attractions here--there are warm hill-sides in winter, and cool, rustling breezes in summer, and glorious old oak woods, and a hundred brawling brooks, (you may laugh if you have a mind to,) if the memory of their noisy prattle runs back to boyhood, call louder on a man than the yellowest mint-drops.

"At any rate, I will try what can be done to make my farm worthy of a history. If the resources which such men as Mr. James Johnston have opened to view, be not humbug; if the system of changing crops, of multiplying manures, of more effectual tillage, of adequate protection to cattle; it careful feeding be not wholly impracticable; if the history of your most successful croppings be not fairy tales, and the *locum in quo* a fairy land, why, *something shall be done here.* The progress of my trial, I shall open in scattering continuations of this history, neither exaggerating or concealing, in the hope that it may possibly be useful."

From the Mercantile Journal.

HEN'S EGGS.

We have received from a subscriber a couple of hen's eggs of immense size—being a specimen of the productions of a breed of hens brought into this country from Guilderland a few years since, by Capt. John Deveraux, of Marblehead. They weigh 3 oz. and 3-4 a piece, and measure 7 3-4 inches in circumference one way, and 6 1-2 the other. If any one has any larger hen's eggs, bring them along!

We learn that these Dutch fowls are of a large size, some weighing 7 pounds a piece, of a coal black color, may be easily fattened, are delicate food, and first rate layers. Their eggs are usually one-third larger than those of our ordinary fowls. One of the hens which Capt. Deveraux brought home, layed 160 eggs, daily, in succession!

From the Farmers' Cabinet.

THINGS THAT DO NOT LOOK WELL.

When I saw the substance of the following paragraphs in the Prairie Farmer, I felt more than half inclined to be out of humor with its editors. Parts of them touched me so closely, that I concluded at once, some of my neighbors had been to Chicago, and told of me, and had got the piece inserted just to vex me. Let, however, "him laugh who wins." Instead of being annoyed, though touched in a sore place, I have made up my mind, not only to try to reform myself in those particulars, but also to give others an opportunity to profit by them. Q.

It does not look well to let the garden grow up to weeds, and then say that a garden is good for nothing.

It does not look well to have the gate without hinges, held up by a prop, leaving at the bottom an aperture through which some hog, with a convenient nose, can rub, and so slip around into the garden.

It does not look well for a man to thump and abuse his horses or oxen, just to try his whip; or to suffer his boys to do so.

It does not look well to keep the horse in a stable not cleaned, till his hind feet are 45 degrees higher than his fore feet, so that he is obliged to rear up to get himself on a level every time he wishes to swallow a little hay or oats.

It does not look well to have the women hang out the clothes on rough and thorny bushes, and tear them in getting them off, when a neat line would save that trouble.

It does not look well for a man to keep a dog, when he can keep no cow or pig; and for no purpose but to worry the neighbors' cattle, and annoy the neighborhood with continual barking.

It does not look well for any body's daughters to walk the streets in kid slips in December, and lace themselves so cruelly that their voices waste away, and their cheeks turn to the color of moon-light.

From the Maine Farmer.

PATENT ENDLESS BEE-HIVE.

John Milholland and Benjamin Crane, of Chandlersville, Muskingham county, Ohio, have invented a new and useful improvement in the construction and use of the Bee-hive, for which they have obtained letters patent of the U. S. Government, bearing date the 29th day of April, 1842.

The nature of the invention is in constructing the Bee-house in horizontal, rectangular sections, or boxes without tops or bottoms, placed on a base,—supported by four spreading legs,—on which base is a double inclined bottom, for the discharge of all offensive matter. The sections are placed upon the base, and upon one another, until the house is raised to a sufficient height, and the upper box is covered with a horizontal top.

From the Farmers' Cabinet.

BEE MOTH.

Mr. Editor—In the last number of your Cabinet, you say that "on examining your bee-hives in the morning, you have been annoyed by frequently finding on their platform, worms full grown, which had no doubt been hatched from the egg of the bee moth. Where did they come from? Will some of our friends tell us?"

The bee moth is a nocturnal visiter, and enters the hive after the bees have retired to rest, and deposits its egg in the comb where the insect, when hatched, meets with its proper food, until it arrives at maturity. It then descends to the bench, and incloses itself by the web which it spins, and passes into the pupa or chrysalis state, before it becomes a fly. The moth-worms, which have lived through the winter, will commence leaving the comb the last of March and beginning of April, and continue to do so till late in May; by which time those that came first have become flies—ready to enter the hives and carry on their work of destruction. These insects pass through all their different changes, from the egg to the fly, during the hot months, in the course of five or six weeks. In 1838, I put some of these worms in a glass jar, on the 9th, 12th and 14th of April; the flies came out after the 23d of May. Few worms were found under the hives after this date.

To mitigate the ravages of the bee moth, I spread salt on the bench below the bee-hive, and keep it there from March to November. If the worm should descend when the salt is damp, it will be so far prostrated as seldom to recover; but if dry, it has very little effect. Frequent attention is still necessary to meet with success in the management of bees.

An Octogenarian.

Albermarle, Va., May 31, 1844.

From the N. E. Farmer.

IMPROVE THE BORDERS OF FIELDS.

Strips of land on the borders of fields, next to the wall or fence, where the plow could not be brought to work, are very often suffered to lie idle, and produce nothing. Now, if such strips were improved by planting bush beans or peas, or winter squashes, they would yield a product of more profit, I venture to say, taking into account the expense bestowed on them, than the same amount of land planted with the main crop of the field.

"Many a mickle makes a muckle," says the Scotch proverb; and a hill of beans here, and of squashes there, in spots which would not otherwise be occupied with any thing of value, will count up at harvest, and furnish a supply of these excellent vegetables for family use, sufficient, perhaps, for the whole winter.

This may seem to some a small matter; not so do I view it; it is an object worthy the farmer's attention. He certainly renders his reputation of being a good husbandman somewhat questionable, who suffers any portion of his land to lie idle, that could be just as well improved, and with an assurance of profit.

Many such unoccupied strips of land as those alluded to, might be put to a useful purpose, I think, in being planted with the sun-flower—the seeds of which, some maintain, are no less valuable for poultry than grain. If these seeds have such value, most certainly they would well repay for the expense incurred in raising them.

D.

From the Albany Cultivator.

BEES.

To stop bees from fighting and robbing one another, break the comb of the robbers so that the honey will run down among them, and they will go to work at home. I had two hives of bees destroyed this month by being robbed, and should have had another robbed, if I had not received the above information.

Substitute for Cream in Coffee.—Beat the white of an egg to a froth, put to it a small lump of butter, and turn the coffee to it gradually, so that it may not curdle. It is difficult to distinguish the taste from fresh cream.

Toothache.—The London Medical Gazette states that the *Fepeta cataria* of Linnæus is recommended by Dr. Gaustamacchia as a sovereign remedy for toothache, whether it proceeds from catching cold or caries. The leaves of the plant are placed between the affected tooth and the opposite one; this causes a copious flow of saliva, and in two or three minutes the mos violent pains are relieved. If the patients cannot keep the leaves in contact with the diseased tooth, they must chew them, and the object is equally attained by a flow of saliva thus incited.

Croton Water.—The length of pipes laid down in the city of New York for distributing the Croton water is 150 miles. The amount of water rents realised for the year ending 1st May, 1844, was $92,626. The water is used by 4932 private dwellings, which pay from $5 to $25 per annum; the average rate per annum, for dwellings, is $12. The number of steam engines, stables, bathing houses, &c., &c., supplied with water is 1987. There are 600 free hydrants, and 1500 fire hydrants.

A Singular Case.---A Mr. Hewett died lately in Ohio with the mumps, followed by erysipelas, which affected his brain. In his delirium he injured two persons; one received a slight abrasion on the hand which was followed by an alarming swelling---another received a blow on the eye brow, which was followed by swelling and derangement. He grasped his mother's hand so tightly as to stick his nails in her flesh—the hand became inflamed, the arm swelled to the shoulder, with livid spots, and she died.

CONTENTS OF THIS NUMBER.

Selections, Extracts, &c.

Dana's Prize Essay,.....105-107
Utility of Geese to the Farmer,.....107
Overseers,.....107-188
Report on Indian Corn,.....108--109
Treatment of Sick Animals,.....109
Country Life,.....109
Economy,.....109--110
Barbour County Agricultural Society,.....110
The Young Farmer's Catechism,.....110
Strawberries,.....110
An Independent Woman,.....110
Editorials—Poultry; Cheap Gin Band; A New Subsoil Plow; Cure for Blind Staggers; Treating Cucumber Bugs to Eggs; Nutritive Properties of Flour, etc.....111
To make Water Cold,.....111
Farming in Connecticut,.....111
Hen's Eggs,.....111
Things that do not Look Well; Patent Endless Bee-Hive; Bee Moth; Improve the Borders of Fields; Bees; Substitute for Cream in Coffee; Toothache,.....112

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SOUTHERN CULTIVATOR.

VOL. II. AUGUSTA, GA., JULY 24, 1844. No. 15.

ORIGINAL COMMUNICATIONS.

For the Southern Cultivator.

OVERCROPPING.

MR. EDITOR—Since you have published my first essay, I shall try again. Your readers, no doubt, felt alarmed when the destruction of lands at the South was attributed to so many causes, for fear all the subjects would be treated at once: they were relieved when the last subject was commenced first, just as we commence plowing a field on the far side first, and finish at the gate; so that we may not have to pass over the plowed ground, but have it all smooth and even. If my subjects are not treated as your regular writers and book-makers do theirs, (for I do not profess to understand their arts,) I shall drive on steady as we do when plowing, and try to do my work well.

The next subject to improper implements of tillage, was over-cropping, or planting more than can be cultivated in a proper manner. My brother farmers often remind me of the child, to whom Dr. Franklin continued to give apples, and who, in trying to hold all that were given to him, let fall nearly all he had received. We are all children of a larger growth, in our dispositions, and often lose what we have, by reaching after more than we can hold. And, by attempting to cultivate too much land, we make less than if we had cultivated a smaller quantity in a neater and better manner. If the farmers can be convinced, that they can raise more produce on less land, and with less labor, it will be their interest to try the experiment. There is a pleasure, a beauty, and independence in farming, which no other calling or profession can claim: by over-cropping, all these are sacrificed. Everything has to be done in the roughest manner; the grain is planted when the ground is only half prepared to receive it. Over-cropping necessarily leads to over-tasking; requiring more of the working hands than they can perform well. They become careless, slight their work, and injure the growing crop. The hands become prematurely old and decrepid, the horses and mules are soon reduced to poverty, and are able to perform only half work; the lands become less productive every year, making it appear necessary to plant more, in order to produce a given quantity. Such a system, if continued, will lead to utter ruin in the end; or compel a man finally to abandon his home and his country, and remove to the "far west."

A farmer should not make his calculations for one year only, but should look forward to the end of several years to future profit. We cannot become suddenly rich; and, if we can make a support, and improve our lands, our stock, &c., and gradually increase in wealth, or even hold our own in such times as the present, we shall be doing well. Many men have failed from too great an anxiety to get rich quick, not being willing to wait and content themselves with small and regular profits. After making a plentiful supply of all kinds of provisions, and making all the clothing necessary for his family; raising his horses and mules, and raising a number of sheep equal to the whole number of his family, white and black; then every farmer should plant as much cotton every year, as he can cultivate neatly, and no more. Facts and well attested experiments alone, can convince most of the farmers, and often the experiments have to be tried by each one individually, before he is satisfied with the result. Let every farmer in the State, then, manure such a sized piece of land as his means will allow—say one acre, or five or ten acres—prepare it well, and plant it at the proper time, in corn or cotton; cultivate neatly, and measure or weigh the production, and then make a calculation for a number of such acres sufficient for his force, and he will at once see the difference between such cropping, and skinning over a farm, and wearing it out. If as much can be made from one manured acre, as from three unmanured acres, it will be less labor to cultivate one acre than three, and then the one acre is ready manured for the next year's crop. But I already hear them say, "What does one acre prove? We may manure one acre, but that proves nothing, because we can never find manure enough for one-tenth part of our whole farms." Manuring a plantation is a new and untried business to most of the Southern farmers, who generally have found barely enough manure for their gardens. All science is progressive; we cannot expect to reach perfection at the first or even second attempts—but, by perseverance, we may leave our children with more knowledge of agriculture than we commenced with. Some men are now living who recollect when cotton was thinned with hands, the open bolls pulled and carried into the house, and there picked out, and then the seed separated from the cotton with the fingers. Who would have thought, then, that a hand now would be able to make five bags of cotton in one year? Some years ago, it consumed three or four month's of time to cross the Atlantic ocean, now it is crossed in 12 or 15 days. It once took 3 or 4 weeks to go from Georgia to New York; it is now travelled in 3½ days. And so of equal improvements in many other arts and sciences. Some whole countries are highly manured, that were once as barren as the worn-out fields of Georgia. Shall we despair of improving our farms, in sight of such vast improvements? Shall we sit still, and acknowledge ourselves less energetic, less active, and less enterprising, than other people and other professions. The intellect of the South has always compared favorably with other sections of the country. Let us, then, not despair. If one acre can be made to yield as much as three acres, one hundred acres, by the same process, may be made to produce as much as three hundred acres. The sum can be worked by the rule of three; and, while they are all cyphering it out, I will tell them where and how we can get, at least, some of the manure, which will obviate the apparent necessity for over-cropping.

Yours, &c., PLOWMAN.

For the Southern Cultivator.

EXTRACT.

Imagine the greatest General, after the most glorious victory recorded in history, the dead, wounded and dying, the widow's lamentations, and the orphan's tears, and the amount of misery inflicted upon the human race, in consequence thereof.—Imagine the wily politician, urging his tortuous way to high office, covered with the mantle of private friendships broken, with hypocrisy, cunning and corruption.—Imagine the scientific agriculturist, directing, encouraging, counselling and assisting his co-laborers in the management of their farms, until the whole State shall attain the highest degree of agricultural improvement, "The fields shall blossom as the rose," and peace, happiness and abundance, shall bless the land.

Which is the greatest benefactor to mankind? which most likely to receive the approbation of Divine Providence? PHILOS.

For the Southern Cultivator.

MINERVA, GA., 4th July, 1844.

MR. EDITOR—With a few honorable exceptions, I see that most of the original communications in your very useful paper, contain no failures of crops, but a series of the most successful plans and efforts, with the greatest amount of production per acre. At a very slight glance, all this would appear unexceptionable. But I am compelled to believe, these authors of original communications have succeeded far beyond anything which comes within the reach of my experience—or else they have given us the bright side of the picture to admire, while they keep the other side in the dark. I wish, for the general good of agriculturists, that these gentlemen would deal fairly with us (your readers) upon the broad principle of their systems, and be particular in giving us, in detail, their account of failures, as well as success. Such a mode of procedure would accomplish more in setting us on the right plan, than any partial description which gives a very high coloring only to a part of their mode of agriculture, while nothing is said concerning, perhaps, nine-tenths of the general system. The moralist may lecture me a month on the evils of intemperance, and the good effects of a life of virtue, without producing much effect. But when I behold the drunkard in rags, wallowing in filth, my senses are struck with his degraded condition in the keenest manner; I am in a moment convinced of his error by contrast. Not so with these gentlemen farmers; all their deductions are specimens of perfection—they give us one side of the picture only, and we have no foundation afforded us by them, of the good and the bad plans by which to form the contrast. It is by contrasting a bad and ruinous course of husbandry with a good one, that we are enabled to see the beauties, and appreciate the advantages of the latter. And, as I have some considerable more experience in a ruinous system of planting than any other, and also as an offset to the other communications, for the purpose of a contrast, I propose to offer—

The way to make a light crop of corn.—March,

1843, in farmer's language, I ridged up fifty acres of lime, or prairie land, part of which had been in cultivation for fifteen years, the other part nine years. On the 15th of March, I planted the corn five feet one way and three feet the other; at the same time I put into the hills one handful of well-rotted cotton seed as manure. In consequence of the *raw* condition of the land, I got a bad stand. Two stalks were left in the hill. After the corn was fairly up, I plowed and hoed it over. I plowed the corn over (with what is common in Georgia, Turner plows,) four times, and each time the plow sunk very deep. But unfortunately for the crop, and myself too, the first or breaking up plowing was done at a very dry time, and consequently it turned over in large clods, which never became pulverized the whole summer. This last is a very remarkable circumstance, but no less remarkable than true. The third time it was plowed, it was up to the shoulders of a common-sized man: previous to this plowing, the corn was rather likely. But in two days after the third time the plow ran through it, close and deep, (for I thought there was nothing better than deep plowing,) *it fired.* [The last two words may appear very awkward to an editor—but, my word for it, the readers of the Cultivator will understand, by them, the exact meaning I wish to convey.] During this plowing, the weather was hot and dry, and continued so till the corn *fired* up to the tassel—and had there been any blades above the tassel, I have no doubt but they would have shared in the same fatal blast. It will be remembered that it was the third plowing which produced this bad effect. This state of things brought me to a perfect stand still. Thinks I, to myself, what shall I do—my corn is *fired all over?* Is there no remedy? Ultimately I adopted a vulgar and foolish conclusion, viz: "a piece of the same dog will cure his poison," and I gave it another, which made the fourth deep plowing! In all conscience, I soon found this was sufficient. I gathered about ten bushels of *nubbins* per acre—was not very particular about the measurement, for I have no fears that any of my brother farmers will be the least disposed to discredit my report, as they are all, to a man of them, convinced that this thing of *nicely* measuring nubbins, is by no means a profitable or pleasant job.

This is an accurate and faithful description of the whole process; one, too, which experience teaches me will be certain to *make a light crop of corn.* I had planted the same land in corn for a number of years previous; and, with a *loose system* of cultivation, common all over our country, I made, in the general, about 20 bushels per acre. I attribute the failure of the crop to the following causes:

1st. From what I have seen, four times is too often to plow corn.

2d. One, instead of two stalks, should have been left in the hill.

3d. The subsoil of the land is a stiff clay in part, and a calcareous marl on another portion of the field, which requires the breaking up to be done during the winter, for reasons sufficiently obvious to any planter.

4th. From the want of this early breaking and pulverizing, the perpendicular or straight roots were prevented extending down and seeking their due quantity of nourishment, and the horizontal or side roots were all torn, and so lacerated by the close deep plowing, the two last times, that they were utterly incapable of performing their function—that is, of assimilating and carrying nourishment to the stalks. All of us know, when the doctor salivates us, what an awful situation our mouths are placed in—and precisely so it is when the roots (mouths) of a plant are torn and lacerated by bad cultivation. It is impossible to take nourishment.

D. B.

☞ A lead mine has been discovered on the Ilinois shore of the Ohio river about 30 miles above the mouth of the Cumberland river. The ore is said to contain a larger quantity of silver than any lead ore yet mined in this country.

For the Southern Cultivator.

HUMBUGS.

The word humbug is of such frequent use, and so unreservedly bestowed upon every new enterprise of late, that a definition becomes unnecessary. Any thing new, whether it be a principle in politics, service in religion, or in the form of a new variety of seed, is apt to be seized upon with interest, and looked upon either as promising liberty in its purest form, piety without self-denial, or an abundant crop without labor. Thus, under a sort of romantic excitement, we recommend without caution, and promise without limit, until expectation is raised so high that it is impossible it should be realized when brought to the test of practical life. Those, therefore, who had been indulging in golden dreams, under the mortification of disappointment, denounce as a humbug what they once enthusiastically recommended.

This is one reason why things, which are really useful, have been denounced as humbugs. Persons making the first experiments, speak *too freely* of qualities they merely know from hearsay, and promise *too much* not to disappoint: so that, in our anxiety to become well supplied, as soon as possible, with whatever promises so great a reward, we save *every seed* from our first crop—every pig from our first Berkshire, or every calf from our fine cow, without any reference to the maturity of the first, or strength of constitution, or symmetry of form in the two last. The consequence is, that the imperfect seed produce imperfect plants, which impart their weakness to others, and the seed rapidly degenerate: so that, about the third year, when we have a sufficiency for a full crop, we find it so much deteriorated that we pronounce it a humbug, throw it aside, and not unfrequently with the rash promise that we will, in future, have nothing to do with any "new-fangled notion;" which promise, however, is broken upon the first temptation.

The same might be said of stock, with equal or greater propriety. The anxiety to get in stock as soon as possible, leads us to breed from every animal, however defective in form, until the whole perfection of the improvement is lost by impatience and avarice. This position may be illustrated by the Berkshires, which have become common, and are frequently pointed out as one of the humbugs of the day.

But, as I set out with more direct reference to seeds, and especially wheat, I will not pursue this part of the subject. The time has arrived when farmers should be selecting their seed for the next crops: and as this is, ere long, to be a more important branch of Southern agriculture, it is time that we were paying more attention to the subject, especially in middle and upper Georgia. I have no doubt that if more care were taken in the selection of seed, together with greater care in preparation for the crop, and the seed sowed early, our wheat crop, which has hitherto been looked upon as the most uncertain, and promising the least return, would not only be as certain as any other crop, but probably the most profitable.

Mr. Ellsworth, in his able and interesting report for 1843, under the head of "Selection of Proper Seed," recommends that, in saving seed wheat, a large seive be used, which will allow five out of six bushels to pass through, and the remaining bushel only to be saved. Thus, the finest and most perfect grains are used, from which we may as reasonably expect a crop of a like kind, as we would look for a fine pig from a sow of fine parts. If this course were pursued with new varieties of seed, we would not so often see the best kinds thrown aside as humbugs, but might expect a more rapid improvement in our agriculture.

WALTON.

P. S.—I noticed in a number of the Cultivator, either of December or January last, a request that you would publish a simple mode of analysing soils; and, in your last, I see a short mode described. If you will hunt among your old files of the Georgia Journal, you will find a very simple mode at greater length, published about April 21st, 1840.

We have no file of the Journal, and should feel obliged to our correspondent for a copy of the analysis referred to.—ED. S. CULT.

For the Southern Cultivator.

MR. EDITOR—With much delight I see, in the last No. of the Southern Cultivator, that the subject of overseers is now undergoing a careful investigation. I have been long since of the opinion, that no subject, connected with the planting interest in the Southern States, needs a more careful review and radical change, than the loose and careless system of overseeing everywhere so prevalent. And what is still more strange to me, planters, otherwise well informed, operating, too, with a large capital, are annually employing men for overseers, who have no more scientific skill in the business of successful husbandry, than they have in directing a ship right in a whirlwind. Nay, more; perhaps one half of these submit the whole process entirely and exclusively to the care and management of these tyros! This is the great reason why the sound of indebtedness is heard to grate so heavily upon the ears of so many planters. Some are engaged in the discharge of the arduous duties of a profession, while others, perhaps, are promenading the pleasant walks or batteries of Saratoga, Limestone Springs, etc.

Why, Mr. Editor, these gentlemen have certainly, like "Old Rip Van Winkle," slumbered long enough. Upon what reasonable foundation can they build a hope of seeing, upon their return to the plantation, green pastures, and fields laden with the riches of the earth? I am but a novice in the art myself; but I can prove my position correct when I state that it is a problem of no easy solution, to adapt the different manures in our reach to the many and various soils in the Southern States, with the best mode of preparing the land, time of planting, tools best adapted to the whole process of culture, &c.; and again, the most economical mode of feeding and raising the farm stock. I hope the ball on this subject is started, and the wise heads of our citizens will handle it with "naked hands," expose error, and set us right upon such a momentous subject.

D. B.

The Bull and Locomotive.—The daring character of an infuriated bull is well known and attested in many singular encounters. A bull near Gray's Ferry on the Schuylkill, was frequently annoyed by the noise and fiery appearance of the locomotive and train, which daily passed his grazing ground. At length he determined to take the matter in hand. So waiting the appearance of the locomotive, which came hissing along the road at full speed, the bull gathered himself up for the rencounter, made a fearful dash, full tilt, with his horns at the engine. The concussion threw the whole train off the track on Sunday, June 7, delaying the arrival several hours beyond the time. The poor bull, of course met with his *quietus* very suddenly—having been cruelly mangled and killed at the very onset.

☞ A remarkable fact is stated of the chickens hatched by the machine in New York, that they are *several ounces* heavier than the egg was at first. Is this the case with all chickens?

SELECTIONS, EXTRACTS, &c.

OBSERVATIONS

On the Action of Calcareous Manures, and their Practical Application and Effects.

Previous to the commencement of my examination of the marls of South Carolina, there had been but very few attempts to profit by their application as manure. It would be both a needless and ungrateful task to inquire into the causes of this strange and general neglect of such wide-spread and easily available resources for fertility and riches—and of disregard and ignorance of truths generally known and acted upon in other regions far less blessed in these resources, and in the capability of profiting by their use, than lower South Carolina. It is enough here to state, that such was the general neglect of calcareous manures, and general want of efficient information as to their value. Many individuals, indeed, had made very small and mostly improper applications of marl, and a few of lime, and which were as loose and inaccurate as experiments, as they were ill-directed to obtain the best results as manure. And a few individuals presented more marked and meritorious exceptions, in having within the last few years made much larger applications, and having reaped more or less appreciable and admitted profits therefrom. Among these, the oldest or the largest operators, and, as they deemed themselves, also successful marlers, besides those already mentioned, were Mr. Darby, of Orangeburgh, Dr. J. S. Palmer, and Col. S. J. Palmer, of Charleston district, Dr. Robert Gourdin, of Georgetown district, and Gen. Jas. H. Hammond, of Silver Bluff, Barnwell. Reports of the applications of the four last named gentlemen have been recently published, and their favorable results stated. But the total amount of these, added to all other applications of marl and lime made in South Carolina previously to 1843, it is believed, fell short of 500 acres. It would furnish an interesting and most useful statistical document, if the Legislature would hereafter require the extent of each planter's applications of marl and lime, for every successive year, to be ascertained and recorded by the tax collectors; and, a few years hence, also the then and thereafter estimated increased product of the improvements thereby made. Such statements, continued and published regularly year after year, would exhibit an amount of newly directed labor, and of newly created agricultural wealth, beyond any present conception of the effects; and the exhibition would stimulate the further exertion and increase more than any other possible mode of conveying instruction, or of urging the propriety and profit of using calcareous manures. Nearly all of the few applications of marl, or of lime, which have heretofore been made, have failed of early or satisfactory effect, or for so long as observed for effects, because of the improper mode of application; which was, as usual with putrescent manures, by burying the marl under the "list," and thereby avoiding, and indeed *preventing* all intermixture of the manure with the soil, which is essential to its operation.

Considering the great variations and degrees of fertility of cultivated soils, and the important bearing of such differences on the profits of the cultivators, it is strange that so little attention has been given to the causes, or of care to avoid the worst and obtain the best effects. Every proprietor knows that the profit of cultivation is much greater on rich than on poor ground. But very few have estimated *how much* greater is the profit; and nowhere, within the sphere of my observation, are the prices of lands properly graduated, in proportion to their fertility and true productive value. If properly estimated, it would be manifest that poor land, for cultivation, if to remain poor, would be dear as a gift, and its cultivation the most costly of all. Yet, the greater number of cultivators of such soils, are content to remain in that condition, without making an effort, and scarcely indulging a hope of improving their fields and their profits.

It is not the less remarkable, that the more sanguine and enterprising cultivators, who aim and hope to improve, seldom inquire into the causes and manner of the operation designed, and therefore, most naturally, seldom succeed in their design. To apply the ordinary putrescent manure, is generally the sole means attempted or thought of; and if on poor and bad soils, in the race between exhaustion and new fertilization, the latter is invariably left far behind.

It is a universally acknowledged truth, that what is needed to make soil most productive, are such ingredients as will supply, in sufficient abundance, the *food of plants*. Growing plants draw from the soil by their roots, and are nourished by the dissolved parts of nearly all putrescent matters, either vegetable or animal, or mixtures of both. The ordinary manures are precisely such substances; and sooner or later, by their gradual decomposition, are converted almost entirely to the food for plants, and if judiciously applied, are consumed by, and help to sustain, the growing crops.

But it is not enough, by a great deal, that manures serving to form food for plants, shall be given to the soil. There are other conditions necessary for their profitable and best effects; and the most important of these conditions is, that the soil shall be so constituted as to preserve the putrescent matters from waste and profitless dissipation, and to give them wholly for the support and growth of plants. This condition is furnished by nature, in well-constituted soils only, which present the most productive and durable lands under tillage. Without this constitution, all the supplies of putrescent manures which can be given to a farm, will be of little profit; and if derived from its own resources only, will be utterly insufficient to preserve, and still less to increase, the yearly measure of productiveness of the land.—*Ruffin's Agricultural Survey of South Carolina.*

From the Maine Farmer.

RUTA BAGA AS FOOD FOR CATTLE.

Mr. Holmes:—I see by your remarks in the last Farmer, that the merits of the Ruta Baga have been called in question, and that it has already fallen from the high estimation in which it was once held, and is now but little cultivated. Of the evidence upon which it has been condemned, as unprofitable, you have not given us any account. Yet there may be sufficient reason for not cultivating it very extensively, without practicing the old proverb that, "when one is found going down hill, every one must give him a push." Much of its favor has arisen from the great fondness which has been manifested for it, by cattle. They are not, however, more fond of the Ruta Baga than of most other succulent food, which is very naturally accounted for, as all the juices are retained in addition to the organic matter which it contains, and is fed to cattle at a time of year when they are confined exclusively to dry fodder. This, I think, must account for the fondness of cattle for Ruta Baga, rather than for any extraordinary nourishing qualities which it may possess, as apples, potatoes and beets, and any other succulent food, given them in the winter season, is devoured with equal avidity as turneps. It has been found, by chemists, that about nine parts in ten of turneps, are water, while most other vegetables of the grain kind average nearly reversed proportions of water and organic matters, containing about fifteen or eighteen parts of water, and eighty-five of organic matters. This, certainly, is fair evidence against turneps, that is, if Liebig knows any thing.

Another item in the indictment is, that the ground has to be made richer for their growth than for any other crop that is produced, and is left in a poorer condition for a succeeding crop than by any other vegetable. This fact I know not how to account for, but experience has proved it to be so. In some cases, but little more than half the grass is obtained from land occupied by turneps the previous year, that will grow on land that has been planted to corn or potatoes, with the same manuring.

Turneps, when fed to cattle, operate in some way to produce a powerful appetite, and this causes them to eat a larger quantity of fodder of the coarser kind, it required, and in this way they are kept in tolerable good condition upon comparatively poor fare. In this, principally, lies the philosophy of cattle thriving as well on poor hay with a few turneps, as they will when kept on good hay, without any turneps. G.

Winthrop, June, 1844.

From the American Agriculturist.

SHOW OF THE AGRICULTURAL, HORTICULTURAL, AND BOTANICAL SOCIETY OF JEFFERSON COLLEGE.

I sit down to give you a brief report of our Spring Agricultural Show, which came off yesterday. We have had a very interesting meeting, and the attendance, all things considered, was very full indeed. Several other calls of interest occurred, unavoidably, on the same day, in our neighborhood, drawing off a great many; and the roads are insufferably dusty, from the long, severe and ruinous drought we have had, and still have. Nevertheless, *we who do the work* have great cause of complaint to make, that on a subject of such vital importance to their interests, as *improvement in all things agricultural*, planters show so much apathy. On the occasion of a very interesting trial of the comparative merits of a number of agricultural implements, which occupied a committee appointed for the purpose, during two hours in the morning, there were but some fifteen or twenty planters on the ground! But, from the many expressions of regret, which I have since heard, for non-attendance, when it became known how much of exceeding interest they had missed, I am confident that at the October trial we shall have *a crowd*. It is upon this part of the exhibition that I have most to say, as my time and attention, during the day, were too much taken up to give the stock and other things more than a cursory glance. I will forward you papers with the reports of committees at length, and pass on with the remark, that the number of cattle and horses was, I thought, fully as great as at any previous meeting, some of them being remarkably fine.

Of bulls, Mr. Hall had a very handsome two year old white bull, which, in my estimation, rated first; he is a compact, well-made animal, and *handles* well. Col. D. Cooper, from Wilkinson county, exhibited an aged bull which I must place next, even over the head of Mr. Hall's mountain of beef, Beltzhover: in my opinion, there is no comparison between the two animals, though I know that I could find few here to side with me. There were also two younger bulls, the property of Samuel Chamberlain and D. P. Jackson, that were very fine.

Of sheep and hogs, the show was a poor one; every one being, like myself, afraid of the excessive dust. Col. Wailes exhibited a pen of very good sheep. In vegetables and flowers, too, we were sadly wanting—caused by our long drought. Col. Wailes, the Rev. Mr. Whielden, and Dr. Butterfield, occupied one of the college halls with their fine cabinets of stones, minerals, fossils, &c. Col. W. has a most valuable collection, particularly of agates, madrepores, cornelians, &c., and of fossil and Indian remains. Mr. Whielden exhibited a miniature cage, of broom-straw, in which were some dozen silk worms in the act of enveloping themselves in their silken covering—by them lay a number of others, in different stages of growth, feeding.

But to the implements. At about nine o'clock, the committee commenced operations on a piece of ground here, on Ingleside. From the printed report, you will see what plows, &c., were on the ground, and also the opinion of the committee, which you would oblige many here by publishing,† and confer, too, a more extensive benefit upon the makers of such things, if they will act upon it as they ought to do, than they are probably aware of. From the opinions there given, I must beg leave to differ somewhat. The fact is, we know so little here of how implements of cast-iron answer the purpose, that there is a strong prejudice against

them, which, however, would quickly give way to conviction. Ruggles, Nourse & Mason's plow, is a very large and heavy implement,‡ my objection to which I will give presently. It turned over a regular furrow of from 12 to 13 inches, by 6½ inches; while the two others that were tried turned only about 8 to 9, by from 4 to 7 inches. In my opinion the teams *did not* exert themselves more with the eagle plow than with the others, and the hand had not half the work to do—then see the difference in the amount of work done. The ground was very dry, and had been much trodden, yet the eagle plow laid it neatly over, covering up the weeds completely, and leaving the ground well pulverized, and ready for any kind of crop; while the other plows ran very unsteadily, giving the plowman much to do, and turning over a very irregular furrow, throwing up the ground in large clods, gouging them out, as it were. Wood's plow has been many years in use here, and gives universal satisfaction, doing excellent work when the ground is in fair order; and they are light, strong and cheap, costing $6, to 7 and $8. But when brought beside this excellent Boston plow of Ruggles, Nourse & Mason's, it was completely left behind, so much so, as to open the eyes of all present. One of the committee remarked, that though he had been a farmer all his life, he had learned more of plows and plowing during these two hours than he ever knew before! There is no necessity for our plows and other implements being so strong and heavy as with you—we have no stones. Then our teams are lighter—the weather greatly hotter, so that animals cannot stand so much. We are almost all too short of team, and of consequence have, at times, to work them too many hours. But I will go more at length into this matter in an article I have nearly ready for you, on *Implements for the South*, with rough sketches of some of my improvements. Our plows, however, want *length* to give them *steadiness*.

Let Ruggles, Nourse & Mason, and others of your best makers, including Prouty & Mears, and Barnaby & Mooer, send to our Fall Show some plows made for the South, and such as they can furnish us with here at fair rates, (my side-hill plow cost me here $18,50, Ruggles & Co.'s, with coulter and wheel, $13,) and they will open up for themselves a good market. We are tired of sending for implements without first seeing them. If they will forward them from Boston, they will come to the society free of charge, (see report.) Let them consign them to Wm. I. Minor, Esq., our President, and have them reach us by the middle of October, and they shall all have a fair trial, and will afterward be sold by the society, and the money remitted to the owners, or disposed of otherwise as may be ordered. Is there no possibility of sending us a correct dynamometer at the same time? If there is, let me know the cost, and the society, or some of its members will remit you in time to send us one.

If the owners of the plows so desire it, they will be forwarded to Shows in the adjoining counties of Jefferson and Wilkinson, and exhibited there also.

THOMAS AFFLECK.

Ingleside, Miss., 27th April, 1844.

‡Since the reception of this report, we have forwarded Mr. A. smaller plows of Ruggles, Nourse & Mason's manufacture, which we are certain will please him, for a single mule can draw with ease the smallest one we sent.—ED.

MODE OF APPLYING GUANO.

Having prepared the accompanying directions for using Guano, for the information of Sir Charles Lemon's tenantry, it has occurred to me that their publication may be of service to others:

1. It should never be applied in contact with seeds, as it kills them as soon as they begin to vegetate.

2. It should be mixed as equally as possible, with about four times its bulk of finely pulverized earth, or peat-ashes, (cold.) If sand is used, about twice its bulk will be sufficient.

3. The quantity per acre may vary from two to four cwt., according to the nature and quality of the land. Recent experiments have shown that a quantity which proved highly beneficial in poor soil, became deleterious upon land previously rich.

4. The best time for applying it is shortly after vegetation has commenced, and immediately before rain, or during damp warm weather.

5. The best mode of application is, to divide the quantity per acre into two or three equal parts, and sow them broadcast at intervals of about ten days, or a fortnight.

6. For small allotments it may be more convenient to use it in a liquid state—in which case, mix 4 lbs. of guano with 12 gallons of water, and let it stand for 24 hours before being used. The same guano will do for mixing again with the same quantity of water, after the first is drawn off.—*W. B. Booth, in London Gard. Chronicle.*

AGRICULTURE IN THE UNITED STATES.

In this country, where land is cheap, and the disposition of the people pacific, everything invites to the arts of agriculture, of gardening and domestic architecture. Public gardens, on the scale of such plantations in Europe and Asia, are now unknown to us. There is no feature of the old countries that more agreeably and newly strikes the American, than the beautiful gardens of Europe—such as the Boboli in Florence, the Villa Borghese in Rome, the Villa d'Este in Tivoli; works easily imitated here, and which might well make the land dear to the citizen, and inflame patriotism. It is the fine art which is left for us, now that sculpture, and painting, and religious and civil architecture have become effete, and have passed into second childhood. We have twenty degrees of latitude wherein to choose a seat, and the new modes of travelling enlarge the opportunity of selection, by making it easy to cultivate very distant tracts, and yet remain in strict intercourse with the centre of trade and population. And the whole force of all the arts goes to facilitate the decoration of lands and dwellings. A garden has this advantage, it makes you indifferent where you live. A well laid garden makes the face of the country about you of no account; low or high, grand or mean, you have made a beautiful abode worthy of man. If the landscape is pleasing, the garden shows it—if tame, it excludes it. A little grove, which any farmer can find, or cause to grow near his house, will, in a few years, so fill the eye and mind of the inhabitant, as to make cataracts and chains of mountains quite unnecessary to his scenery; and he is so contented with his alleys, woodlands, orchards, and river, that Niagara, and the North of the White Hills, and Nantaske Beach, are superfluities. And yet the selection of a fit house-lot has the same advantage over an indifferent one, as the selection of a given employment of a man who has a genius for that work. In the last case, all the culture of years will never make the most painstaking scholar his equal; no more will gardening give the advantage of a happy site to a house in a hole or on a pinnacle. "God Almighty first planted a garden," says Lord Bacon, "and it is the purest of human pleasures. It is the greatest refreshment to the spirits of man, without which, buildings and palaces are but gross handyworks; and a man shall ever see that when ages grow to civility and elegancy, men come to build stately, sooner than to garden finely, as if gardening were the greater perfection."

Bacon has followed up this sentiment in his two essays on *Buildings* and on *Gardens*, with many pleasing details on the decoration of lands; and Aubrey has given us an engaging account of the manner in which Bacon finished his own manor at Gorhambury.

In America, we have hitherto little to boast in this kind. The cities continually drain the country of the best part of its population: the flower of the youth, of both sexes, goes into the towns, and the country is cultivated by so much inferior class. The land—travel a whole day together—looks poverty stricken, and the buildings plain and poor. In Europe, where society has an aristocratic structure, the land is full of men of the best stock, and the best culture, whose interest and pride it is to remain half the year on their estates, and to fill them with every convenience and ornament. Of course these make model farms, and model architecture, and are a constant education to the eye of the surrounding population.

Whatever events in progress shall go to disgust men with cities, and infuse into them the passion for country life, and country pleasures, will render a prodigious service to the whole face of this continent, and will further the most poetic of all the occupations of real life—the bringing out by art the native but hidden graces of the landscape.

I look on such improvements, also, as directly tending to endear the land to the inhabitant, and give him whatever is valuable in local attachment. Any relation to the land, the habit of tilling it or mining it, or even hunting on it, generates the feeling of patriotism. He who keeps shop on it, or he who merely uses it as a support to his desk and ledger, or to his manufactory, values it very little. The vast majority of the people of this country live by the land, and carry its quality in their manners and opinions. We in the Atlantic States, by position, have been commercial, and have, as I said, imbibed easily an European culture. Luckily for us, now, that steam has narrowed the Atlantic to a strait, the nervous, rocky West, is intruding a new and continental element into the national mind, and we shall yet have an American genius. How much better when the whole land is a garden, and the people have grown up in the bowers of a paradise? Without looking, then, to those extraordinary social influences which are now acting in precisely this direction, but only at what is inevitable doing around us, I think we must regard the land as a commanding and increasing power on the American citizen—the sanative and Americanizing influence, which promises to disclose new powers for ages to come.—*R. W. Emerson's Lecture.*

From the American Farmer.

GREAT YIELD OF WHEAT.

We are indebted to Major H. Capron, of the Laurel Factory, Prince George's County, Md., for the subjoined letter, giving the result of his successful culture of "*worn-out fields*," and of his having raised at the rate of 43 bushels of Mediterranean Wheat, per acre, on land which five years ago would not have yielded 7 bushels of oats per acre. Major C. has sent us a sample of it, which looks plump enough to weigh well, and we should think would come up to the standard weight. Of this, however, we cannot speak with certainty, and should therefore thank Major C. to measure a bushel and inform us of its weight; and while he may be complying with this request, we trust that he will advise us of the successful method he pursued to bring up his "*worn-out old fields*" from the capacity of yielding 7 bushels of oats to the acre, to that of producing 43 bushels of good wheat; and here we would have him to believe us when we declare, that he could not address a more "desirable" paper to the agricultural community than such an one would prove. In all the old States, there are thousands and tens of thousands of just such lands as he has described, which do not now produce enough to pay the cost of interest, taxes and tillage, much less to afford a profit—and if these can be brought up, by any process moderately costly, to produce only half what his "old fields" have yielded, an end will at once be put to emigration, that bane of the old States, which, for years, have been draining them of much of their capital, enterprise, skill and industry; and in so doing he will prove himself a real benefactor—a benefactor whose good deeds will live as long as memory or history serves to transmit the incidents of one generation to another.

The sample of this productive wheat which we have received, we consider *in trust* for distri-

bution, and shall be happy to divide it among our patrons.

—

Laurel Factory, June 24th, 1844.

To the Editor of the American Farmer:

Sir,—I send you a sample of Mediterranean Wheat, grown upon a field of about 26 acres; which, five years ago, would not have brought 7 bushels of oats per acre. I cut this wheat on the 12th of this month, and thrashed it out on the 21st. I measured a piece as an average of the whole field of 133 yards by 39 yards—containing 1 11-160 acres. The product, as ascertained by three disinterested witnesses, was 46½ bushels or about 43 bushels per acre.

This demonstrates pretty clearly, I think, the practicability of improving these "worn-out old fields." The art of renovating these kind of lands I may give at some future time, should you consider it desirable.

Yours very truly, H. Capron.

From the Massachusetts Plowman.

THE SEASON FOR TRIMMING TREES.

As soon as planting is over, we should look to our apple trees and cut off the surplus branches. We cannot recommend cutting large branches in any case; we usually do more hurt than good when we take off a limb that is more than two inches in diameter, for the wound will not often heal soon enough to prevent decay at the heart. A tree will sometimes look more thriftily, for a time, in consequence of lopping large branches, but the improvement will not be lasting. If trees are attended to annually, there will be no need of cutting large limbs. If they have been long neglected, we should content ourselves with trimming out the small limbs, and suffer the tree to continue in the shape that it has already formed.

We may not be able to give any satisfactory reason for preferring May to March, for trimming apple trees. Most farmers, however, agree that the sooner the wound is healed, the better, and that it is not of service to draw forth much sap at the wound. Now it is certain that a wound never begins to heal till the tree has put forth its leaf. It has no means of making new wood before it has leaves, for the sap that forms the new wood passes through the leaf. From the time of trimming, then, to the forming of the leaf, your wound is exposed to the weather, and the process of healing has not commenced.

We find that when a limb is cut in July, there will be about as much new wood made to cover the wound, during the season, as when the limb is cut earlier. There is a critical time, however, in July, between the first and second growth of the season, when the sap will run from a wound, and will discolor the bark for a foot or more below it; we notice this in trimming nursery trees, and we think trimming in July is not judicious.

As to the comparative waste of sap in March and May, we call the attention of our readers to the practice of tapping the maple for the purpose of gathering sap. All know that no sap can be gathered in May, and not much in April, in our latitude. Sap runs most freely in March. For this reason, we never trim grape vines in March. But after the leaf is formed, the vines will not bleed.

You want a fine saw to trim with, to make as smooth a wound as may be, and if a knife is used after the saw, the wound will heal the sooner. Yet we often see trees trimmed with an axe! We also see the bark torn off of the limbs by the heavy boots of the trimmer. All will own this is barbarous. If you stand on the tree while trimming, you should wear slippers or thin shoes.

When no limbs larger than one inch in diameter are cut, the wound may be expected to heal over in a couple of years; in a thrifty tree it will heal in one year. When only small limbs are cut, there will be no need of covering the wound with clay, or with any kind of plaster. We cannot find that limbs which have been grafted and then covered over with any kind of compost, heal faster than limbs uncovered. A limb should always be cut in such a manner as to let no rain-water stand in the little cup that will be formed by the healing of the wound.

THE DISEASE OF WHEAT—PREVENTIVE MEASURES.

In his excellent report, (says the American Farmer,) as Commissioner of Patents, Mr. Ellsworth alludes to the methods of preventing the disease and attacks to which the wheat crop is exposed. He says that the time when the field is struck with rust, seems to be just at the time of ripening. A remarkable fact on this subject is stated in a report to the New Jersey Agricultural Society. An extraordinary field of wheat, supposed to be out of danger, on a hot day became drenched by a sudden shower, which came on between 1 and 3 o'clock, P. M. All was still; and on the passing away of the shower, the sun came out intensely hot. The owner went into his field to examine his wheat, which he found much pressed down by the shower; he immediately perceived a continued ticking, or snapping noise, in every direction. The straw was fine and bright; but, on examining it, he found it bursting in short slits one quarter of an inch long, and the sap exuding from it.

A day or two after, the whole field was darkened with rust, and the wheat nearly ruined. Another instance of the same kind is also related.. The conclusion stated is—that the loss of the sap, running out and becoming dried on the straw, occasioned the rust. The ancient Greeks and Romans attributed rust to the effect of the weather on the grain, as has been mentioned above, and had a prayer to the supposed Rubigo for warding off the disease.

He says that, to avoid the fly, manuring high at seed-time and sowing late, were resorted to. But that this was attended by mildew and rust. The best means of prevention are—first, a good, dry, loamy soil, well prepared by cultivation, and not too recently manured. Secondly, cover the seed about two inches deep, either with drill or plow, that it may have good hold of the soil, and not be thrown out by winter frost. Alluding to the various expedients to protect wheat from smut, he says:

"One directs the wheat, after being thoroughly washed, to be soaked 10 or 12 hours in salt water, as strong as it can be made. It is further said that no injury will result if it lies in the brine for several days, provided it can be in a cool place. After thus soaking it, let it be limed. Another person recommends that the seeds, when placed in the brine, be stirred up thoroughly, so that the light seeds may rise to the surface, and be skimmed off; afterwards, that the brine be drained into a tub, and the seed thinly spread on the floor, and sifted with quick-lime, at the rate of one gallon to a bushel; and, after carefully stirring the lime through the seed a few times, it is allowed to remain a few hours, and then sown. The seed which underwent the perfect cleaning gave a return of pure wheat—and that which was sown in its natural state was infected with smut, and had a mixture also of chess.

"In a Northumberland report on agriculture, it is stated that Mr. Culley, who grew annually from 400 to 600 acres of wheat, had but one instance of smut in 40 years, and this was when the wheat was not steeped. Another experiment on seed, in which were a few balls of smut—one third being steeped in chamber ley, and limed; one third being steeped in the same, and not limed; and the remainder without steeping or liming; and the result was, that the seed pickeled and limed, and that pickeled and not limed, were free from smut, but the other had smutty ears in abundance. Another experiment was tried, by taking a peck of very smutty wheat, of which one-half was sown in its natural state, the other half washed as clean as possible, in three waters, soaked two hours in brine strong enough to bear an egg, and dashed with lime; the result was, two-thirds of the unwashed was smutty, but of the pickeled and limed seed there was a full crop, without a single ear of smut. A similar experiment, somewhat varied, is the following: Of four sacks of smutty wheat, one was soaked in strong brine only; one prepared with lime only; one was soaked in strong brine, and then lay in lime all night; and the fourth was sown without anything: the result was, where brine only was used, now and then there was a smutty ear, but not many; where lime only was used, there was about the same quantity of smut; where lime and brine were used, not a single smutty ear could be found; and where nothing was used, it was a mass of smut. In another experiment, however, mentioned in the Southern Planter, wheat salted at the rate of a quart of salt to a bushel succeeded effectually in preventing smut.

THE BLACK BIRD.

The black bird is one of the species against which the efforts not only of idle boys, but our farmers, are directed on account of its habit of attacking the Indian corn at the time of its sprouting from the ground. It is somewhat vexatious, to be sure, to have this injury done to our corn crops; but before the farmer engages in the warfare against these birds, he should take into consideration the fact, that they save ten times the amount of corn they destroy. They pick up thousands of insects that would do far greater damage.

There are only two short periods while the black birds remain with us that they eat vegetable food; in the spring, when the corn is sprouting from the ground, and in autumn, when it is matured. The remainder of their summer's sojourn is spent in rendering us the most essential aid. On opening the stomachs of these and others, worms, bugs, small reptiles, sometimes as many as fifty or sixty of these may be discovered in the stomach of each bird.

HOW TO CLEAN A FOWLING PIECE.

Stop up the touch-holes by means of a little wax, and then pour quicksilver into the barrels, and roll it along them for a few minutes. The mercury and the lead will form an amalgam, and leave the gun as clean as the first day it came out of the shop.

Strain the quicksilver through a piece of thin wash-leather, and it is again fit for use, for the lead will be left in the strainer.

"PRIDE OF CHINA."

It is not generally known, says the Hamburg Indagator, that the berries of the "Pride of China," or as it is commonly termed, "*China Tree*," will protect dried fruit from worms, either in the green or ripe state.

When fruit is sufficiently dried for packing away, gather a few of those berries, say one third in quantity to the fruit, and mix them; or scatter a few of the berries on every layer of the fruit. This precaution will keep out worms, and leave no disagreeable taste.

The China tree is of more value to man than he is aware of. The leaves will also protect his cabbages from the ravages of worms—the berries make good soap, are rich manure, and the roots possess medical qualities. The trees are easily reared, and make a delightful shade.

☞For cleansing brass, take 1 oz. oxalic acid to a quart of alcohol. Rub with a woollen rag till dry. It has been tested, and with great satisfaction to many.

ACTION OF LIME ON SOILS.

Mr. Ruffin, in his Report on his Agricultural Survey of South Carolina, comes to the following conclusions with regard to the offices performed by lime on soils:

1. In neutralizing the acid principle of soil which is generally present in all naturally poor soils, and which is poisonous to all cultivated and valuable crops. The total removal of this poisonous quality of soils is an immediate and the most obvious effect of the application of calcareous manures.

2. In the power of altering the texture and absorbency of soils. The admixture of calcareous manures with soils, serves in an important degree to moderate the previous opposite defects of being either too open and light, from excess of clay, and also of being either too little or too much retentive of moisture.

3. By alteration of constitution in soils, produced by calcareous manures, all products are rendered more perfect and are ripened earlier.

4. Some lime being essential to the formation of every plant, it may therefore be considered a specific and *climentary manure* for every crop. Still the *direct* operation is, perhaps, the least benefit of lime. Some plants, however, of which clover is one, require so much of this ingredient, that they can scarcely live on ordinary soils.

5. Another operation of calcareous manures, and which is very important also in agricultural and pecuniary value, as well as for other considerations, is that of restraining or perverting the production of *malaria*, or the gaseous products of putrefaction of vegetable matter, injurious to health. No effect yet claimed for the operation of calcareous manures was at first heard with more incredulity than this; yet the short experience of 12 or 15 years only has been enough to remove almost every doubt on this subject in lower Virginia, where marl has been most extensively applied.

6. By furnishing to any soils which had been previously very deficient therein, an ingredient in calcareous earth, essential to their good and perfect constitution, all the functions of the soils and of plants growing thereon, are made more perfect and invigorated: and every source of injury to the crops, whether from soil, season, depredations of insects, or other diseases to which may be alike exposed the marled and unmarled parts of the same field, will be much less hurtful (if even perceptible in effect) on the former than on the latter. The calcareous manuring does not prevent or even lessen these causes of disease and death, but enables the plants, by their greater vigor, to withstand and out-grow the inflictions, and thus renders them comparatively harmless.

No agricultural writer in our country has paid more, if as much, attention to the properties of lime, its action and benefits, in the melioration of the condition of lands, than Mr. Ruffin, and, therefore, we take the more pleasure in presenting the above conclusions of his mind, after many years of intense study, close observation, and practical experience.

We are gratified to see, that among the properties possessed by lime, he assigns to it that of being an "*alimentary manure*," a property which we have long since claimed for it, but which few were willing to allow it, even amongst those who were warmest in its praise as an improver of soils. We based our opinion of its being a nutricious, as well as mechanical agent, upon the fact that all analysis of vegetable substances, grown upon limed land, have shown very distinct traces of calcareous matter, and hence we drew our deduction from that fact, that if it had not operated as nourishment, the lime thus detected as a constituent of such vegetables, would not have been taken up by their roots and distributed through their entire series of stems, leaves and fruit or berry; for to us it has long appeared obvious enough, that unless the portions of lime taken up contributed to the sustenance of plants, their organs of feeding would have had the instinctive sagacity to reject them; or if not so, that the lime taken up would have exerted a deleterious influence upon their growth and elaboration, as well as upon the maturation of their fruit and seed. But while we have thus thought and contended, we have always maintained, that, however important the agency exerted by lime—however essential its application was to the improvement of soil, that still animal and vegetable manures were indispensable pre-requisites, in any perfect system looking to the effectual restoration of lands which might have been exhausted of their fertility.

By the analysis of plants of various kinds, their constituent properties have been found to consist of many substances; and it is but fair to infer that each and all are necessary to their healthful development.

There is one of the offices exerted by lime which appears to have escaped the notice of Mr. Ruffin. We mean the active agency which it performs, in facilitating the decomposition of inert vegetable bodies, and converting insoluble into soluble substances; thus bringing into active and available use countless organic remains which had laid dormant in the earth for ages, and which but for the decomposing powers of lime would so have continued to remain for ages to come. In this way, lime may be considered not only a *manure* in itself, but the manufacturer of *manure* also. Peat, we know, without something to bring its dormant constituents into a state of fermentation, would continue to be unavailable as an improver of soil, and yet the moment it becomes admixed with a very moderate portion of lime, a new constitution or capacity seems to be infused into it, and from that moment may we discover the commencement of decay—from that moment does the process of decomposition begin—from that moment does its inertia become aroused into activity—and just such an effect as we have described to be produced on peat, does lime exert on all the *inert* bodies to be found in the earth.

There is another effect of lime upon clays that we had intended, when we commenced this article, to have remarked upon, but as our able friend of the *Maine Farmer* has treated the subject—the action of lime upon the potash found in clays—better than we could, we copy his article:

Improvement of Clay Soils by Lime and Burning.

Lime has been used upon soils for centuries, sometimes with good effect, and sometimes with no apparent effect at all. Various theories have been brought forward to explain its action where it did good, and its want of action where no benefit was apparent.

Some parts of the theories, or explanation of its action are undoubtedly correct; but, as every year the research of farmers and chemists bring something new to light, we see that we did not know all about the action of this substance, and, of course, all our theories could not be correct. That lime enters into the composition of some plants, when combined with other substances, and thus becomes "part and parcel" of the crop, is true—that it also renders some stiff clays more open and easy of culture, is true—that it combines with acid matters in the soil, is true. A German chemist, while experimenting on lime and clays, observed that if common potter's clay, or pipe clay, were diffused through water, and this added to milk of lime, (common whitewash,) the mixture would thicken immediately. If this mixture be kept for some months, and then strong acid be added, the clay would become a sort of jelly, (or gelatinous,) which it would not have become if it had not been mixed with the lime. It appears that the lime, on combining with the clay, changes its character, softens it down, or liquifies it, and also liberates the greater part of the alkalies which it contains. Here is a hint towards explaining the action of caustic or quick lime upon stiff clayey soils, which will guide the farmer in its application to the soil. It acts as a key to unlock the imprisoned alkalies, which are indispensable in the production of stem and fruit, and thus become a valuable agent. To effect this on very stiff clay, requires quite a large amount.

Clay is made up of alumine and silex, and sometimes of potash. Alumine, when combined with potash and sulphuric acid, forms, as every one probably knows, the common alum which we buy at the shops. Many clay soils contain all these elements, but very intimately combined, and are then more or less barren; because those elements, or at any rate, the flinty part and the potash, or alkali, are necessary to the growth of the plant. Now, any process which will disunite the materials and render them capable of being taken up by vegetation, will be advantageous to the farmer. One mode is to add lime as above stated. Another mode is to burn the clay.

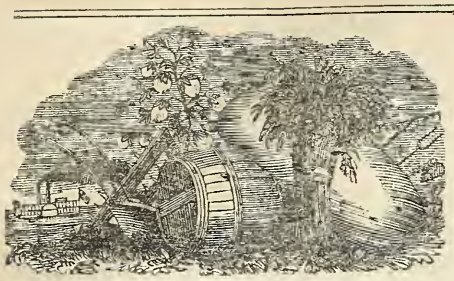
The plan of burning clayey soils has been long known, without any definite idea of the why or the wherefore of the cause of the benefit. It has been found, however, by the chemist, that if you take a lump of clay in its native state and put it into any of the strong acids, it will not be acted upon at all, but if you heat it to redness a short time, and then apply acids, you will find that an essential change has been effected; it will then be acted upon by sulphuric acid—the alkali and albumen combining with it, and the silex or flint being separated in a jelly or gelatinous form. You have often seen newly built brick houses become coated with a white coat, or powder, in moist weather. What is the cause of this? Why, the alkali which was in the clay before the bricks were burnt, becomes, by burning, liberated, and is brought out, or dissolved, by the moisture, and when the moisture evaporates, remains on the wall, like a white powder. On a careful examination of walls that show this powder, it will be seen that it generally appears first where the lime of the mortar and the bricks are in contact. Hence we see that the operation of lime upon clayey soils is more or less beneficial accordingly, as it acts upon the alkaline material in the clay, and also that an improvement is effected in such soils by burning. The latter, however, is an expensive process, and cannot always be used.

From the Manchester Operative.

I HAVE NO TIME TO READ.

The idea of many that they have not time to read is a mere phantom. Did not Franklin find time, in the midst of all his labors, to dive into the hidden recesses of philosophy and to explore an untrodden path of science? Did not the great Frederic, in the midst of a war, yea on the eve of a battle which was to decide the fate of his kingdom, find time to revel in all the charms of philosophy and intellectual pleasures? Did not Buonaparte, with kings in his anti-chamber begging for thrones—with thousands whose destinies were suspended on the brittle thread of his arbitrary nod, have time to converse with books? Cæsar, when he had curbed the spirit of the Roman people, and was thronged with visitors from the remotest kingdom, found time to cultivate his intellect. And every man has time; if he is careful to improve it as well as he might, he can reap a three-fold reward.

Let the mechanics and laborers of the United States then make use of the hours at their disposal, if they want to obtain a proper influence and rank in society. They are the life-blood and the sinew of the community; they can, if they are so disposed, hold in their own hands the destinies of the republic; they are numerous, respectable and powerful; they have only to be educated half as well as other professions to make laws for the nation, and cause the drones and aspiring demagogues to leave their fat offices, which they hold, and pull off their white gloves, and apply their hands to work. Let every laborer, then, devote more of his time to study and the acquisition of useful knowledge. There are but very few who cannot devote daily two hours for mental cultivation. If they would do even this together with combination, how much greater would be their influence and how long would labor be considered as disgraceful?



WEDNESDAY, JULY 24, 1844.

Our Correspondents.—We can but congratulate our readers on the manifestations of an increasing and growing interest on the subject of agricultural improvement which is being developed in Georgia and the South generally, and in nothing is this more strikingly illustrated than in the number and character of our correspondents, which we are much pleased to announce are increasing, and we have assurances from others of their intention to favor us with the results of their observations and experiments. In this connection we must inquire, why has our early and much esteemed friend and correspondent John Farrar, to whom we are indebted for many favors, been so long silent? We hope he will continue to enrich our columns.

"I would suggest the changing the next volume of the Cultivator to the octavo form, as it will make a more convenient form for use. How would once a month do, instead of twice a month? Would it afford more time for communications, &c.? These are mere suggestions; of course, you must consult your own convenience, &c."

The above is an extract from the letter of an esteemed correspondent, to whom we are indebted for several valuable communications that have adorned our columns—and from whom, we are gratified to learn, our readers may expect others. And, as we have had in contemplation the changes he suggests, it may not be improper, on this occasion, to state frankly to our readers and friends our purposes in reference to the future.

We have already been negotiating with a distinguished gentleman of Georgia, well known to the scientific world, who has devoted much attention to the subject of agriculture, and a writer of acknowledged ability, to take charge of the editorial department of the "Southern Cultivator;" and we indulge the hope that we shall consummate the arrangement—in which event, it was our purpose either to change the present form to an octavo of twenty-four pages, or continue it the same size as now, with sixteen pages, and issue it monthly. The acquisition of an editor of acknowledged ability, we feel assured, would be most acceptable to our readers, and we can but indulge the hope that the proposed alterations would be equally acceptable to a great majority of our friends. To accomplish this, however, we must throw ourselves upon the kind offices of our friends, and invoke their aid in extending our circulation in every section. The rate of subscription is so low that we cannot possibly send agents through the country; and, to enable us to engage the services of an editor so competent as the one in contemplation, our friends must bestir themselves to extend our circulation.

The arrangement, however, if completed, will be announced in due time, and prospectuses will be sent to our friends and patrons early in the fall, with such an appeal as we may deem fit and proper on the occasion.

The Crops.—A friend from middle Georgia writes us under date of July 6: Corn crops are fine, plenty of roasting ears in the fields on the 1st July. Cotton large for the season, some bolls appear to be grown or nearly so.

TO DESTROY BED BUGS.

As the hot season approaches, (says the Prairie Farmer,) there will be desperate endeavors on the part of the vermin nations to extend their settlements. Nor will domestic affairs be at all neglected by them. But as their interests generally clash with those of the tenants of buildings, closets, and particularly of beds, a contest for superiority frequently takes place. In these contests it is very desirable to be armed with proper implements, as on that the success of the war mainly depends. Hot water, pepper, tobacco, and smart-weed, are frequently relied on; but we believe that in such cases the victory is very generally, finally, with the biting and odor-bearing party. We advise the use of *mercury*, or quicksilver, as the most effective instrument that can be employed. It is not material in what form it is applied, provided it is strong enough; but we believe the pure article beat into the white of an egg is perhaps as cheap and effective as any.

We have tried this, and have found that the vermin cannot endure it at all. A very small quantity is sufficient to ensure an immediate surrender.

☞Graft Grape Vines when the leaves are putting out, as the sap is then thicker, and the vine will not bleed and drown the scion. So says the Boston Cultivator.

☞Plow up the ground you intend to put in turneps as soon as you possibly can, taking care to divide your manure between the first and last plowing. Be sure to plow deep—subsoil if you can—and make the soil as fine as harrow can make it.

☞Gapes in chickens may be easily cured by giving them small crumbs of dough impregnated with a little soft-soap; once or twice is sufficient.

☞For bots in horses, give one ounce of slaked lime three times a week, mixed with his food, for three weeks.

☞A good book and a good woman are excellent things to those who know how to justly appreciate their value; but there are many who judge of both only by their covering.

From the New England Farmer.

COMPOST MAKING.

The leisure time which the farmer has in summer, cannot be more profitably employed than in gathering materials for, and making compost. Let large drafts be made upon the muck-bed, the surface earth of woodlands, the swamp, bottoms and sides of ponds, and the road-side; gather all useless vegetation, weeds, brakes, &c.; keep the hogs well supplied with the "raw material," and your investments of this kind, in their manufacturing establishment, will bring you in as good a profit as the most sagacious capitalist derives from his investments in other sources of gain.

It has been contended that the employment of men at a dollar per day, during the summer months, in getting materials for compost, would be a profitable expenditure of money by any farmer, and we cannot dispute it.

The more means a man has to do with, in any pursuit, (we mean a wise man,) the greater is his thrift—uncommon contingencies aside—and how emphatically true is this in the case of the farmer. Only give him a plenty of means in the shape of manure, and he can get, ordinarily, as much as he wants from the earth; for, when liberally treated, she yields liberally; but you *can't cheat her*—you can't give her little and expect much.

Ho! then, farmers, for the peat meadow, and dig into its deposites with an animation and a spirit, such as you would be likely to exhibit were you digging in a prolific mine of gold. Let each resolve to outdo his neighbor in the making of compost: get up an enthusiasm in the matter. This, sometimes, accomplishes much: we have seen its effects in politics, in temperance, and other matters; let us now see it excited in compost making. He, among our subscribers, who shall make the most compost this year, with the least means and at the least expense, shall have all the fame which the publication of his achievement in our columns can give—beside the more substantial benefit of increased crops and improved fields. In respect to this business of muck-digging and compost making, we would say—

Let those now dig who never dug before,
And those who've always dug, now dig the more.

From the American Farmer.

PIGS SUCKING A COW.

In an Illinois journal for the present month, I see a notice of a cow, when lying down, deprived of her milk by a porker. It reminds me of a matter occurring under my own observation, which I will mention, and when you see Col. Bomford of the Ordnance Department, mention it to him, as from the short acquaintance I had the gratification to form with him in 1840, when on a visit to his house with my much lamented uncle, the late Hon. Henry Baldwin, I was happy to see, and make improvement of his knowledge of the habits and instincts, sports and pastimes, of domestic animals.

For several weeks in succession, our dairy-maid complained that our best cow was deprived of her milk by some foul means. That when she came from pasture she had just been milked, and that the udder was still wet. I could accuse no one but a tenant who lived near the lane through which they passed, and which was generally open from the cow-yard to the pasture. The accusation was denied with evident surprise. At length I determined to watch the cattle on their evening walk from the pasture, and you may judge my surprise, when I observed that on the cow mooing as if in search of her calf, about fifty yards distant from the yard, four shoats, three months old, ran squealing down to meet her at their utmost speed. The cow remained in the rear of the others, and quietly and patiently stood still till every drop of milk was extracted from her udder by the pigs; they *standing* the while erect on their hind legs, with each a teat in its mouth. The place for the operation was most favorably selected, as small apple-trees interposed between the parties and the house, which stands upon an elevation. The extraordinary thrift of my pigs, which all along was so discernible, was now accounted for; and I learned a lesson which shall never be forgotten through life, viz: never to make accusation on mere circumstantial evidence unless strongly corroborated.

I shut my pigs in a pen immediately. The next morning the cow appeared as uneasy without their visit as if she had lost a calf, and the pigs squealed in answer as if they had been deprived at the time of their mother *sus*.

Now, as Professor Silliman thought his story worth publishing, I have concluded to *write* mine to you.

Preserving a Goose-Egg Under Ground.—I was walking this morning behind my plowman, when his plow turned up from the soil, at the depth of about 8 inches, a goose-egg of very rusty complexion. Almost taking it for granted that it was spoiled, I opened very carefully a small space in one end, with the point of my knife. As no explosion ensued, I made the opening still larger, and to my surprise found the egg perfectly sweet, and its different parts perfect, with the exception that it contained a *very small embryo* completely developed. The white of the egg was as clear and sweet as if newly laid. There was no possible perceptible difference—the yolk was of the natural color and entirely sweet to the smell. The egg must have been in the position from which it was taken, at least twelve months. There can be no mistake in the matter. The ground where it was deposited was a deep, mellow, alluvial loam. Oats had been sowed and harvested last year, and the ground seeded to clover, which, from some cause not having taken well, I am plowing the same land for corn. The egg must have been plowed under last spring. Something, perhaps, may be learned from this; at least of interest to the good lady of the farm-house, if not to others.

Jos. C. G. Kennedy.

Hillside, near Meadville, Pa., 30th April, 1844.

For the Southern Cultivator.

LEGISLATIVE AID IN PROMOTING AGRICULTURE.

Mr. Editor—Some of the States have thought agriculture of sufficient importance to receive legislative encouragement. State premiums are offered for agricultural products, and a corresponding spirit of emulation and improvement is manifested among the farmers of those States. Science, too, is lending her aid to agriculture, and the time will come when the scientific farmer will rank as high in intellectual attainments as the members of other professions. Shall the State of Georgia remain inactive, when other competitors are about to pass her in the race of agricultural distinction? Agricultural labor is of vital importance to every country—the farmer is the main support of human existence. He is the life-blood of the body politic, in peace and in war; the burdens of the country rest upon him, and the brightest pages of history are adorned with his gallant achievements. Freedom, patriotism and virtue, after being driven from the degeneracy and corruption of cities, will find their last resting place in the bosom of the agriculturist. He should then be held in the highest estimation by all other callings and professions.

Will the Legislature of Georgia longer withhold suitable encouragement to agricultural improvements? Let a State Agricultural Society be formed, offering liberal premiums for the best improved farms, stock, implements of husbandry, &c. If, by such means, every acre of arable land in the State should be made, in time, to double its production, the resources of the State would also be doubled. It would, in effect, be the same as adding to the State of Georgia another State of the same size. Will she, then, refuse a small sum annually, in order to effect so great a consummation? It is hoped the next Legislature will evince the wisdom of the reduction of its members by suitable legislation on the subject.

A committee on agriculture, of the Legislature of one of the most improved and scientific farming States in the Union, report that "they believe full one-third of all agricultural labor is literally thrown away by misapplication." Such an estimate is probably not overrated, even as regards our own State. The Legislature, then, should not hesitate to use all the means in her power to restore the lost third part of the labor to the State, by establishing a State Agricultural Society, but should also avail her citizens of the benefit of the improvements which science is adding to agriculture. This can be done at a small expense, by establishing at her University a professorship on the applications of Chemistry and Geology to agriculture. Such a professorship would annually disseminate a large fund of information among the people of the State, upon scientific agriculture, that would be invaluable. It would add more dignity and honor to farming, rank it with the learned professions, and afford useful employment to many young men who now are mere drones upon society.

Liebig, Jr.

☞It is said that ringworms may be, in most cases, simply cured by scratching around the outer surface with the point of a sharp needle. The disease will not pass the line, if the skin is thus cut.

☞To involve yourself in inextricable difficulty, shape your course of action not by fixed principles, but by temporary expedients.

A Turkish Trap.—The Marchioness of Londonderry was inspecting the palace of the Sultan, and had arrived at the extremity of a magnificent room 150 feet long, with a long line of open lattices to the water. "While I was shivering with cold," says she, "and gazing on the Asiatic shore and the delicious view, (which, even in the bleak and dreary month of November, is lovely,) a large square trap-door in the floor was raised, and I heard a voice say, 'Voila la mer, madame!' Hardly believing my senses, I advanced, and truly, the deep, green sea flowed under the splended eastern gallery. A shudder came over me as I thought how readily that trap door might close over its victims, and my blood ran cold while my imagination made the mute inquiry, who can tell on whom that barrier has closed? I recalled the lines,

"When wearied of these fleeting charms and me,
Here yawns the sack, and yonder rolls the sea,"

and I turned away and gladly obeyed the summons to proceed."

Punch on long Dresses.—It is a fact that ladies at present wear very long dresses.—Every fact in female fashions is meant expressly to attract notice; accordingly, we feel called upon to notice this.

Evil has ever its counterpoise of good. It is sad to behold the train bedraggled with mud, but consoling to reflect that it sweeps the crossing. The dust that saturates the flowing robe might else have bedimmed the boot of Wellington.

The drapery which shrouds the exquisite instep conceals, also, the discolored stocking. What matters the bunion, unespied? Elegance may be veiled by superfluity of vesture; but it is in the power of her proprietress to elevate the flounce; nor need the ankle of symmetry absolutely be sandalled in vain.

Heedlessness, going down stairs behind Beauty, may tread on her skirt; but the laceration of the garment is good for trade.

Time is one thing: Extent another. The dress of loveliness may reach from here to Jericho; but what lady, willingly, would wear a gown longer than a week?

Castor Oil.—We have been presented with a specimen of this invaluable medicine, manufactured by Joshua Willis, of Troup county, Ga. It is a most beautiful article, and will bear a favorable comparison, even in appearance, with that brought from abroad. Mr. Willis is manufacturing the article at his farm in Troup county, in large quantities, and is offering it at as low a rate as it can be possibly sold by those who bring it from a distance.—We trust he will meet with the success his undertaking merits.—*Columbus Enq.*

Crops.—A letter from Smithland, Ky. says: "The rains in the West are daily and tremendous. We yesterday had an awful thunder storm, accompanied with one of the hardest rains I almost ever saw fall. It reminded me of the August rain of 1813, in New-York. The wet weather is doing much damage to the growing crops."

American Hemp.—Nearly 5,000 bales, or 1,123,500 lbs. of American Hemp were received at Boston from New-Orleans during the six months ending on the 1st inst.

CONTENTS OF THIS NUMBER.

Communications.

Overcropping,.....113
Extract,.....113
The way to make a Light Crop of Corn,.....113-114
Humbugs,.....114
Overseers,.....114
Legislative Aid in Promoting Agriculture,.....120

Selections, Extracts, &c.

Observations on the Action of Calcareous Manures and their Practical Application and Effects,.....115
Ruta Baga as Food for Cattle,.....115
Show of the Agricultural, Horticultural and Botanical Society of Jefferson College,.....115-116
Mode of Applying Guano,.....116
Agriculture in the United States,.....116
Great Yield of Wheat,.....116-117
The Season for Trimming Trees,.....117
The Disease of Wheat—Preventive Measures,.....117
The Black Bird.....117
How to cleanse a Fowling Piece,.....117
Pride of China,.....117
Action of Lime on Soils,.....118
I have no time to Read,.....118
Editorials, etc.,.....119
Compost Making,.....119
Pigs Sucking a Cow; Preserving a Goose Egg under Ground,.....119-120
A Turkish Trap; Punch on Long Dresses; Castor Oil.....120

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A SUPPLY of the following varieties of fresh TURNEP SEED just received, viz:

Yellow Sweedish or Ruta Baga, very fine for stock,

Large Globe Turnep, } Fine
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Seed Corn of every valuable variety,
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WM. HAINES, Jr.,
No. 232 Broad street, Augusta, Ga.
August 30. 18-tf

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SOUTHERN CULTIVATOR.

VOL. II. AUGUSTA, GA., AUGUST 7, 1844. No. 16.

ORIGINAL COMMUNICATIONS.

For the Southern Cultivator.

EMIGRATION.

The principal motives to our citizens of the planting States to emigrate to the West, were, formerly, the restless disposition of the people of a new country—the greedy avarice of the acquisition of land—and the strong propensity (to some extent commendable) to accumulate wealth. I speak not of those who were driven from their homes by crime, or made wanderers by the union of pride and poverty, or those who sought professional employment; but of planters. Many of them were also weary of cultivating lands which, under their rude agriculture, gave early signs of exhaustion; and, being ignorant of the modes of renovating soils, and indeed, (had they known them,) probably deficient in the steady energy and philosophic patience requisite to apply them successfully, they preferred rather to encounter the difficulties of settling a wilderness, for its advantages of rich land, its facilities for living, and its freedom from restraint. And no doubt they all attached full credit to the exaggerated accounts of the wonderful fertility, and incomparable climate of that region, which yielded in perfection all the products of the earth; of its immense forests, filled with game, and its rivers with fish; of its extensive prairies, rich and perennial meadows for stock: that it was exempt from the fatal diseases of old countries, and that they would immediately possess a princely domain, and in a few years, a princely fortune.

Led captive by an excited imagination, and disregarding the plainest precepts of wisdom, they sacrificed, some of them, ease, competence and health—abandoned friends and relatives, their old homestead, tolerable lands and reasonable prospects, here, for an *ignis fatuus* of wealth in distant parts. Experience, however, soon taught them, and with indelible impression, all the privations and sufferings to be endured, the manifold obstacles to be subdued, and the almost superhuman labor to be achieved, in order to secure even moderate success. The deception which had carried them far away, to drag out in sickness and its consequent poverty, a miserable life, was exposed and denounced over and again by many, who cherished the hopeless resolution to come back again when able. A few returned, broken in fortune and in spirit, yet happy to pass the rest of their days amid the scenes and the society of their birthplace. Others who had gone early, and with large capital, selected the best locations—and, by indomitable energy and judicious management, received a fair compensation. But none have realized their vain imaginings, or have discovered yet a Hesperian garden.

The spirit of adventure was essentially checked by these discouragements. People were no longer seen moving in crowds and by companies, but singly, or by families, and at intervals: some prompted by a vague desire of change, or the genius of enterprise, the great moral feature of our countrymen; and others from a disposition to invest their surplus means in wild, but fertile lands, and await a future day for interest upon it, when the increase of population would create a demand for them. These were legitimate causes of emigration, and had no tendency to depopulate any section of the old States. But the recent praises of Texas soil and climate—the prospect to both political parties of the South, of its early union with this confederacy, and the fear that citizens of the West and Northwest, by immediate removal, may secure all the favorable situations in that country, are calculated to awaken anew the feeling of speculation. The signs that are exhibited around us, cannot be mistaken.

To those who have already determined to leave us, and are yet inclined to think before they act, I will offer a few considerations, which may be worthy of their deliberate attention. And first, it is by no means certain that Texas will be annexed. The period for adopting this measure may have passed forever. Some of her late papers intimate that if her independence is acknowledged by Mexico, she can maintain a national existence, and will refuse to unite with us. And it is said that France and England will use sure means to obtain this recognition, if she will abandon the idea of annexation. But if, on the contrary, she again consents, it is said that the North, while willing to abide by the terms of the Constitution and not interfere with us, will never sanction the admission of a foreign slave State. The South will, of course, only receive her as such. Can there be a compromise between these conflicting parties—the adherents of the institution—who believe that it has bestowed upon them countless blessings, and are opposed to taking any step for its extinction, or to modify it at all; and the people of the North, who are strongly and naturally averse to it, from the want of necessity for its use among them—from the public opinion of the world—and (with a large portion certainly) from jealousy of the happy division of classes it has adjusted at the South; and of the aristocratic ease, and consequent genius, manners, high-toned honor and undaunted courage, it has imparted to those educated under its influence? It is to be hoped there will be, (I express no opinion, and venture no conjecture,) yet it will be seen that difficulties attend the speedy termination of the controversy; and those who, under the fairest auspices, might be persuaded to emigrate there, should, on this ground, pause for the present. But the fever to leave, being once thoroughly enkindled, no disappointment with regard to Texas can allay it. The resolution formed to go, and preparation made for it, home and its occupation are no longer attractive, and they will move, at all events, to Mississippi or Louisiana.

What I am about to say, may, therefore, be as fully applied to these States as to Texas. Notwithstanding the high authority of General Thompson to the contrary, all that country must be more or less unhealthy. It is an axiom that rich lands are sickly: they are fertile mainly by the vast accumulation of vegetable matter, and under the action of moisture, and the intense heat of that clime, which continues the greater part of the year, fermentation and decay are constantly going on, and the most deadly miasmata are evaporated. Seatsfield, who, by the way, is a close and shrewd observer, who seems to have caught, instinctively, the spirit of every scene and of every character he has portrayed, and is peculiarly interesting to us for his genuine Southern feeling, remarks somewhere, in reference to Louisiana, (and Texas is essentially the same,) that the country might do, were "the heat and vapors less oppressive; the atmosphere less hot-house like; and the moschetoes less ravenous,—but these draw from you the last remnant of warm and pure blood, and leave little more than red cool salt-water in the veins, creating salt humors, and cruel liver complaints." His description of the cypress swamp, and its sociable inhabitants, and seas of muck, and lying adjacent to the settlements, too, is enough, it would seem, to content a sensible man with a *pine barren*, where good water, robust health, and long life, would be the accompaniments of a moderate income. He says further, that the black earth in some places is 18 feet in depth, and the mud slime, on the banks of Red River, is 16 feet deep: a mass of muck that Dr. Dana would, no doubt, behold with rapture. Can health reside here? I would as soon look for it in the Pontine Marshes of Italy, or in the diked mud-flats of Holland, where, I believe, the average of human life is about 20 years. There are some situations, it is true, which are better than others, but the pestilential vapors of such extensive swamps and bottoms as are found there, must contaminate, more or less, the whole atmosphere. And the annual ravages of the yellow fever in some parts, the bilious fever in others, and the liver complaint and pleurisy in all, are satisfactory proofs of the fact. It may be said, that desire in the pursuit of riches is never counteracted by fear, and rumors of sickness and death excite no alarm in the enterprising, who risk everything for the certainty of gain—(this may be an abstract truth, but I leave the dissussion and disposal of it to each one's feelings)—that since large fortunes can be rapidly made, as asserted, a short residence only will be necessary, when the product of their enchantment may be wafted to a purer clime, and the enjoyment of it be enhanced by the hazard of procuring it. And indeed, to come more directly to the practical objects of this paper, that a larger amount of cotton, and of better quality, can be grown to the acre, the soil richer and more durable, the climate more genial, and the living more abundant and cheaper.

The fertility of the land, and the benificence of the clime, are undeniable. The fatal diseases which they generate, have been mentioned. The cost, to an emigrant, of an improved river plantation, will average 25 or $30 an acre, some being as high as $50. This requires a large capital to begin with. The greater number who move, would thus expend their all for a place. The failure of the first crop would involve him in serious embarrassment, and especially if he has obtained his land on credit, which is by no means unusual. He must part with some of his negroes to meet the necessary payments. A second failure would ruin him irretrievably. The recent overwhelming flood, which, it is estimated, has destroyed nearly half a million of bags of cotton, and corn in proportion, is a specimen of the chances of failure. These chances will increase, in proportion to the clearings along all the branches to the main river, until, in a few years, they will become regular annual visitants. The cream of the

land, the mud slime, (of Seatsfield,) all of alluvial character, (susceptible of culture,) will be again taken by the current which originally deposited it—and the planter who boasted of his wealth in it, must yield it to the flood, and flee for his life. This evil has done its worst with us already. Our rivers and creeks are cleared to their sources, and lands which have not latterly been regularly submerged, may be considered safe forever, and their high value fixed. The price of land, not immediately on the high-ways to market, is from 10 to $15 an acre, depending on quality and situation. To prepare it for planting, requires almost, to us, inconceivable labor. The forests are dense, and the growth colossal; and it has been asserted that $10 to the acre, will not more than cover the cost of clearing. Thus time and arduous work, are necessary for preparation, and expenses are accumulating. A failure in the crop here, would be ruinous likewise; and though beyond the reach of high water, perhaps, yet no section there is exempt from the desolating effects of the rust, the worm, lice and caterpillar, which exact an annual tribute from the crop, and sometimes share the whole of it among themselves. Besides the steady rains of several week's duration, which often destroy, and always stain a large proportion of it. And here, as on the river, sickness might prostrate the entire force, and a fine crop be left in the fields to rot. The mortality, too, is very great, and the profits of the most successful plantations are largely drawn upon to supply the deficiency among the hands, which the fever yearly creates. There is little breeding among them, and of course no increase, save by accessions from the more Eastern States. But a still sadder fate may overtake the emigrant. He might procure, in his own judgment, and in that of his lawyer, an indisputable title to his land, and yet be sued for it within a year, and his claim be extinguished by the verdict of a jury. Such mishaps have occurred to the most acute: and I have recently been informed of an instance of an accomplished lawyer, who emigrated, paid $10,000 for his place, prepared to plant, was sued by some claimant of his land, and turned off it by due course of law; yet, he knew the difficulties and risks of land claims, and gave a thorough inspection to his title before paying the money. This was within the United States. What must be the uncertainties in Texas, where land has been granted by the league, and scrip for it sold and re-sold, with sometimes forty claimants for the same tract. This will more than counterbalance the difference of the price of land in Texas and Mississippi; and yet the best plantations there are dear, and should it be annexed to us, they would, no doubt, advance several hundred per cent.

The climate is more fruitful: a longer period is permitted the plant to grow and mature. Yet an enlightened planter has asserted, that, taking the vicissitudes of the seasons into account, the 33rd parallel of latitude is the most favorable for the growth of cotton. Although the plant is indigenous to a lower latitude, and the seed grown here cannot be used continuously, year after year, in consequence of the rot—which experience proved, some years ago, to have arisen from predisposition of the seed, and which was entirely remedied by procuring more Southern seed; yet soils yield all plants in greater perfection by occasionally changing the seed, as well as changing the crop, and at any rate, planters would have made this exchange. It is very little trouble or expense to procure, every year, a few bushels of seed from Texas or Louisiana: and, as the quality of this last was imparted to it by admixture of the Sea Island with it, (vide Seabrook,) we have only to plant the black seed with our own, in order to obtain an equally good staple.

With regard to the cheapness of living, they are all as dependant, for mules and meat, upon Tennessee and Kentucky, as the worst managers among us are, and pay about the same price for them. But we have made a commencement to supply ourselves, at least, with meat, which is a great point gained. A few planters, scattered here and there, are unable to raise stock. It becomes the prey of runaways and theives, and is destroyed. The community must engage in it and distribute the losses. We have made fair progress: much the larger part of our planters buy no meat, and in a few years, it is to be hoped, that neither horses, nor mules, nor hogs, will be supplied us, from beyond the mountains. The beginning has to be made in the Southwest, and it may be asserted with truth, that our subsistence is *cheaper* than theirs.

Turn, now, to the picture which home presents. Our lands are entirely our own, and are amply furnished with stock and implements, and with all requisite buildings and machinery. Still, the best of them are valued at from 5 to $10 an acre, and the average may be had at from 2 to $6. True, they are scarcely comparable to those of the West, which produce 2,000 and 2,500 lbs. seed cotton to the acre, (and not 4,000 lbs., as Gen. Thompson said in his Texas letter,) though rarely is the half of it gathered—while ours yield ordinarily an average of from 500 to 800 lbs. Yet, they are far easier worked, and more of it can, therefore, be tended; and, if we will apply in time, rest, and labor, and manure, a moiety of what it would cost to break up and move, to buy and settle other lands, and prepare them properly for planting, (without adding the high cost of mortality in our force,) we can, *on the first rotation*, make them yield a *bag to the acre*, and do it afterwards *in perpetuo*. Suppose a planter with 3,000 acres of average land: He sells for $15,000, and emigrates to Louisiana: He buys a choice place there of 2,000 acres, which he deems enough, and pays $60,000 for it; or, if he gets it at $25 the acre, $50,000; or, if he prefers to be off from the river, he pays from 20 to $30,000. It has cost him from 500 to $1,000 to move, including, if you please, the loss of part of his crop, which he must leave in order to reach his new place in time to prepare for planting, provided this last is improved; and at least ten times that amount, if he has it to clear, in time, and work, and subsistence, without adding what he could have made and saved in the meantime, on his old plantation. He can gather only about five bags to the hand after all, taking one season with another, and probably he would not average it; for, should it escape all the evils which I have alluded to, his force could not pick out much more than this, and do justice to his plantation improvements. What if we were to expend the half of one of these sums, even of the smallest, in making and spreading manure, and adopted the system of rotating, resting, and cultivating to advantage, would we not make more than we could possibly gather? would not our worn old fields bloom like an enriched garden spot? Could we not make an abundance on ½d the land we now till, and work our negroes lightly, employ our surplus force in mending stock, (of which we would soon have a superabundance,) procuring timber and lumber for market, and making all requisite improvements? No plan can be devised to render us more prosperous and independent, and it is this which, sooner or later, unavoidable necessity will compel us to adopt.

We are freer from the insect, and from disease, than in the West, and are never flooded by high water; nor is the crop injured, or diminished, by the incessant rains of a more tropical clime, nor torn up by the awful tornadoes which sometimes desolate a whole region, and which Seatsfield depicts with great accuracy, and power, and effect. We have an earlier market, being on the Atlantic, and can realize half a cent more for our cotton, than if in equal competition, which will pay the difference they obtain in the quality of theirs. We are comparatively healthy, with air which is not saturated and heavy almost to cutting, as theirs is, with the miasm of the swamps; and water, which they cannot dig from their mud banks, nor filter from their lime prairies. We enjoy more of the luxuries and pleasures of life, and are, therefore, higher in the scale of rational existence; for civilization consists in the multiplicity and vanity of our wants, physical, moral and intellectual. We mingle in a more refined society and educate our children in higher principles, and for nobler objects, than the gross scenes of Western life exhibit—where wild sports and vulgar pastimes supersede moral development, and physical energy predominates, to the exclusion of intellectual culture. And indeed, the mass of our advantages over them, far surpass that of theirs over us; and, with skilful management and well-directed industry, we are competent to equal them in their boasted privileges.

But my article is long enough. The subject is full of interest, and at this crisis of importance, and susceptible of a variety of views, which, at a future time, I may present. I have said enough to awaken attention; and if it deters a single family from risking the loss of all they possess, and peace, comfort and health, to venture among the disastrous uncertainties of Western life, my effort will be amply repaid.

A Burke Planter.

For the Southern Cultivator.

CULTIVATION OF COTTON.

The Improvement in the Cultivation of Cotton in the Flat Woods—The susceptibility of the Improvements of the Lands shown by Experiments.

Mr. Editor—It is known to a great many people in this section of country, that the flat-woods of Elbert county was once thought to be unfavorable to the culture of cotton, though late experiments have shown the suspicion to be incorrect; however, in its original state, it is not altogether so well adapted to the production of cotton as higher lands, especially with careless farmers. David Bell, a practical farmer of this county, has proven, from actual experiments, that cotton may be grown, to an advantage, on any land in the Southern clime, where the temperature, and the length of the seasons, will admit of its being raised at all. He has shown the good effects of manures—enough so to induce any farmer to turn his attention to the subject. He is now making a small experiment upon one acre of land, which has been cleared and abandoned years ago, and thought to be irreclaimable—which is supposed to be the case with most of the lands in the flat-woods, when "wornout:" this is also proven to be incorrect. This acre which he has manured, is now in a state of high cultivation—and it is thought it would not be extravagant to say, that it will make 2,000 lbs. of cotton, from its present appearance. His manner of manuring is simple: he finds that litter from the woods, with little of the soil, of itself is an excellent manure; and when combined with the litter from stock, or cow-penned upon, answers, in a high degree, the reclaiming of most any land—and adapts it to the culture of most of our productions. He finds that low lands, when properly managed, can be made to produce cotton finely. From what observations and experiments he has made, the result of his conviction is, that there is more advantage to be derived from properly planting a crop, than unthinking farmers have heretofore been aware of. He invariably well prepares, and throws his lands, where he intends for cotton, as high as a turning plow will admit of; and where his land is any way low, he uses the hoe to bring it to a proper elevation.

Land done in this way, produces cotton to as early maturity as desirable. He finds it to farmers' interest, to cultivate a small quantity of land to the hand; which, by a proper system of manuring, will yield more to the farmer, than double the amount otherwise cultivated. And, though he is in favor of "annexation," yet he

thinks in this way the territory can be increased to a considerable extent, without extending it one inch. There is one kind of annexation, he thinks, perfectly practicable—that of applying manures in abundance to their exhausted lands; which will advance the farmer's interest, and afford the best protection that could be desired. Try it, farmers, and the happy effects will be the result. A. A. B.

SELECTIONS, EXTRACTS, &c.

From the Columbia South Carolinian.

OVERSEERS—No. II.

We often hear planters boasting of having made six, eight, and sometimes ten bags of cotton to the hand, and when one speaks of making a "fine crop," it is understood that he has turned out five or six bags or more per hand. Occasionally an old planter will take the liberty of inquiring of one of these fine croppers how much corn he has made, but seldom venture further. Now it is this very erroneous idea, that a large number of cotton bags constitute of itself a "fine crop," that is so fatal to all improvement in planting, and so ruinous to overseers. What does it avail a planter to make ten bags of cotton to the hand, if he has to buy corn and meat—if his mules break down—his negroes decrease, and his lands go to nothing?

My idea of a "fine crop" is, first, an increase of negroes; second, enough made on the plantation, of meat, corn, &c., to feed every thing abundantly; third, an improvement, rather than a deterioration, in the productive quality of the lands; fourth, the mules, horses, farming utensils and fences all in first rate order by Christmas; and then, as much cotton as can be made and gathered, under these circumstances. And I will venture to assert, that no planter will thrive, in the long run, who does not make fine crops of this sort. Nor will agriculture steadily improve, until all planters are of this opinion, and act upon it; and not only planters, but overseers. In the vocabulary of overseers, "a fine crop" refers wholly to a fine cotton crop. They boast of nothing else at the muster-ground, and road-working, where they carry, with perhaps a commendable vanity, the first form, first bloom, and first grown boll. When they seek a place, they rest their claims entirely on the number of bags they have heretofore made to the hand, and generally the employer unfortunately recognizes the justice of such claims.

No wonder, then, that the overseer desires to have entire control of the plantation. No wonder he opposes all experiments, or, if they are persisted in, neglects them; presses everything at the end of the lash; pays no attention to the sick, except to keep them in the field as long as possible, and drives them out again at the first moment, and forces sucklers and breeders to the utmost. He has no other interest than to make a big cotton crop. And if this does not please you and induce you to increase his wages, he knows men it will please, and secure him a situation with.

Until planters, therefore, generally come to the opinion, that it is necessary to attend to other things besides making cotton, to get rich by agriculture, it will be impossible to reform overseers, or increase either the individual or aggregate wealth of the country. And that this conclusion is a just one, I appeal to the experience of all planters. During the recent hard times, has any single planter been brought to the block, unless for security debts, who made all, or nearly all his articles of consumption within himself, though he made ever so small crops of cotton? On the other hand, how many of the ten-bag planters have been swept away? In fact, does it not somehow happen, that almost all such planters are, sooner or later, in a very ticklish condition? And generally, they leave to children reared on the ten-bag scale, wornout lands, and broken down negroes. Cotton is *the* great crop, but not the only crop. Energy is a great thing in planting, and doubtless the fundamental principle of success, but something else is also requisite—judgment, care and foresight.

But I am writing about overseers. I wish to see them reformed. Planters must, I fear, first reform themselves. But if they could only be induced, when overseers apply to them for places, to ask the following questions, in the following order, and engage or not engage according to their answers, I believe it would, if the plan was universally adopted and kept up for five years, do more to improve our agriculture than five hundred cattle shows, as serviceable as I think them to be.

1. Will you obey orders, implicitly, promptly, and fully?
2. How many negroes were under your charge last year?
3. How many births had you?
4. How many deaths?
5. How many hogs did you raise?
6. How much corn did you make?
7. How much manure?
8. What experiments did you try?
9. How many of your mules died?
10. Did you leave every thing in good repair?
11. What was your crop of cotton?
12. What is your price?

FRANKLIN.

From the American Agriculturist.

AGRICULTURAL ERRORS.

So many glaring scientific errors find their way into our agricultural works, that I am afraid, unless rectified at home, they will make us the laughing-stock of Europeans. If these works had only a limited local circulation, such errors might be amusing, yet would scarcely be deserving of notice; but as many copies of our works on agriculture find their way to other countries, and are there perused by scientific readers, we must either criticise them among ourselves, or we shall be considered totally ignorant of the science we so glibly write about. I am sorry to undertake so disagreeable a task, and can assure the writers of the articles I am about to review, that I am totally unacquainted with either of them, and that my only object is to save the credit of our common country.

The first article I shall notice, is one written by Mr. Noyes Darling, of four columns, inserted in the Albany Cultivator for March, on lime as a destroyer of sorrel. Mr. Darling is correct in supposing that oxalic acid is formed from the elements of the plants in which it is found; but in error when he gives hydrogen as one of the elements of oxalic acid, this acid being composed of only two elements, carbon and oxygen. It is still more strange that Mr. Dana should prescribe lime as a cure for the growth of sorrel, when it exists in this place as an oxalate of lime, and could not grow in any soil unless lime was present.

The juice of sorrel changed, by a process well known by the operative chemist, to oxalate of potash, has been much used in the arts, and sells at a high price. I have sold it at $3 per pound, and it is now selling at $1. There are about four species of plants which contain oxalate of lime; four species that contain binoxalate of potash, and only one known species (the *cicer parietinum*) that contains uncombined oxalic acid. If this cicer could be cultivated in any part of our country, it would afford a valuable acquisition to the useful arts, in supplying us with oxalic acid, which is now imported at a cost of nearly 50 cents per pound.

A few drachms of oxalic acid will operate as a violent poison; but a small quantity with sugar and water forms a pleasant cooling beverage, and is considered a fine antiseptic. I have drank many gallons of oxalade, and punch made sour with oxalic acid.

I had written thus far, when a friend handed me a work called the Muck Manual, by Mr. Dana, requesting me to review it. I had not read many pages before a suspicion flashed on my mind, that this work had been perused and taken for authority by Mr. Pell, and hence several errors in his article on "Charcoal and its Uses," in the April number of the Agriculturist. This shows the importance of professional writers being correct, and no excuse can be made for Messrs. Dana and Darling. They are my superiors in literature, and the scientific errors they have fallen into, particularly Mr. Dana, who I am informed is an analytical chemist, must arise from a want of due investigation.

I believe Mr. Dana is considered a good analyser of mordants and coloring-matter, and is of course a valuable citizen in such pursuits; yet it struck me with no little surprise, that a practical chemist should have adopted so wild and unsupported a theory. Chemistry is altogether a practical science, and the first lesson I learned, forty years ago, was never to give credence to any theory that was not supported by direct and well-ascertained experiments. This axiom was established by the chemical savants of France in the early period of the science, and when departed from, the chemical world will produce theories as wild and unstable as were those of the old alchemists.

There appears to be a natural tendency in the human mind to sketch imaginary pictures, instead of troubling itself in tracing realities. If we enter a steamboat or hotel, it is much if we do not see some head hung up, phrenologically mapped; we cannot look at a paper, but we observe advertisements of a lecturer who talks about some epileptic, or cat-aleptic ladies, to prove mesmeric phenomena; and what is worse, a large audience looks on and sucks in all as established truths. Several attempts have lately been made by chemists, of more or less celebrity, to run into unsupported theories, which require to be kept in check by the more sober portion of its followers.

Boullay, an European chemist, observed some few years since, a black or dark-brown substance which exuded from the bark of the elm, to which he gave the name of ulmin. It is very sparingly soluble in water, but readily soluble in solutions of the alkaline carbonates. He found its constituents to be carbon, hydrogen, and oxygen, and termed it ulmic acid. He considered it identical with the brown matter of vegetable mould, and as contributing materially to the nutriment of growing plants. Several chemists of the day pursued the subject, and made rather a plausible theory from Boullay's discovery. It will surprise no one that Liebig should take it up, and pursue it with his usual transcendental energy; for even the acute and accurate Berzelius gave it credence for a time, but soon acknowledged his error.

There is no mistake in supposing that carbon, hydrogen and oxygen, contribute very materially to the nutriment of growing plants, for we know that the greater portion of all plants are composed of said elements. Nor is there any difficulty in supposing the exuded substance contained an acid, as almost all the known acids found in the vegetable world are binary, or tertiary compounds of those three elements.

So far as I have read Mr. Dana's Muck Manual, he has founded the chemical portion of his work entirely on the now exploded theory growing out of Boullay's discovery.

I shall renew this subject in a future essay, and review Mr. Dana's work more in detail.

WM. PARTRIDGE.

From the Albany Cultivator.

"KNOWLEDGE IS POWER."

Never was this motto more signally illustrated than in the advantages derived by intelligent farmers from the aid of science. Even a slight acquaintance with chemistry and geology, is productive of profit to the pocket, as well as pleasure to the mind.

"You may be somewhat surprised to find me farming on the hard soil of Connecticut, instead of teaching mathematics in a ship of war," said a worthy friend to me lately; "I am somewhat surprised at the transition myself," he continued; "but the truth is, that upon leaving the ship on a visit homeward, I bought a copy of Liebig's newly published book about Agricultural Chemistry, for the purpose of reading on my journey; and so much was I instructed and en-

tertained, that I determined to take hold of the old farm once more, and endeavor to practice on the doctrines taught by that scientific German. I have done so for a couple of years, and the result more than realizes my expectations. By economy in increasing the quantity and improving the quality of manures, and by applying more manure and better cultivation, our corn crop is more than doubled—aye, trebled; our potato crop is much improved in quality, and greatly in quantity; and our meadows produce hay enough to leave a handsome surplus, where formerly the cattle we now keep would have found rather 'short commons.' But the greatest improvement in reference to the cattle and meadows, results from adopting the plan which I saw mentioned in the Cultivator, as pursued by Hon. Josiah Quincy, of Massachusetts. The old stone fences running through our farm, were a nuisance in my sight, forming ready harbors for noxious vermin and weeds, besides occupying considerable ground. I determined to follow the Quincy fashion, (and those Quincies have many good traits about them,) by soiling our cattle, and thus rendering division fences needless. I thus keep the cattle in better order on the products of much less land, and save additional quantities of manure that would alone pay me for all the trouble I have in housing the animals. By under-draining, I have reclaimed considerable marshy land, making it now productive; and the peat-bog of twelve acres, formerly a mere nuisance, is now one of the most valuable parts of our farm—furnishing us with abundant material to throw into our hog-pen and cow-yard, for forming compost, in connection with an occasional sprinkling of lime to promote decomposition. I should not forget that even the weeds with which the old farm was infested, are now made tributary to the improved mode of cultivation; for, cut frequently, (as all weeds should be,) till they are exterminated,) they form material for additional manure, when drawn into the hog-pen or cow-house for litter. It is satisfactory to find that many in our neighborhood, who at first smiled incredulously at my notions of *book-farming*, (and also some well-meaning doubters, who are always slow of faith,) are now satisfied there is something in it less ridiculous than they formerly supposed. So, with this brief account of myself, since you last met me on board the line-of-battle ship, do you wonder that I have now returned with increased interest to the old farm, where I learnt to plow in the same fields that were cultivated by my ancestors, from the early settlement of Connecticut?"

As one of the multiplying evidences of the beneficial results of agricultural publications—as an example worthy of imitation by many of our farmers, young and old—the foregoing sketch is at your service—in the hope that young men who are inclined to abandon farming in the hope of better fortune otherwise, will at least "*read, reflect and judge,*" before they abandon their farms, however "worn out" or unprofitable those farms may have been. Farmers who practice on such doctrines, have little need of crossing the Rocky Mountains in search of lands in Oregon. Rho.

From the Boston Mercantile Journal.

FATTENING TURKEYS.

On looking over some old papers a few days ago, we came across the following curious mode of fattening turkeys:

"In the winter of 1818-19, a gentleman in this city made the following experiment:—He placed a turkey in an enclosure about four feet long, two feet wide, and three or four feet high. He excluded as much light as he could without preventing a circulation of air, and fed the turkey with soft bricks broken into pieces, with charcoal also broken, and with six grains of corn per day. Fresh water was daily supplied. The box or coop in which the turkey was placed he always locked up with his own hands, and is perfectly confident that nobody interfered with the experiment.

"At the end of one month, he invited a number of his neighbors, among others, two physicians. The turkey, now very large and heavy, was killed and opened by the physicians, and was found to be filled up with fat. The gizzard and entrails were dissected, and nothing was found but a residuum of charcoal and bricks. To conclude the examination satisfactorily, the turkey was eaten, and found to be very good. Last winter he again repeated the experiment with the same success.

"The circumstance which induced him to make the experiment is a very curious one. One of his neighbors informed him, that being driven from the city by the fever of 1793, his family recollected that some fowls that had lived in a kind of loft over his workshop, had been forgotten in the hurry of their removal, and would certainly be starved. They were absent six or eight weeks, and on the retiring of the pestilence returned. To their great astonishment, the fowls were not only alive, but very fat, although there was *nothing* but *charcoal and shavings* that they could have eaten, and some water that had been left in the trough of a grindstone had supplied them with drink."

It appears from the above that turkeys are a species of biped that thrive best on a Graham diet.

AGRICULTURE IN COMMON SCHOOLS.

The following is the report of the committee on Agriculture, as adopted unanimously by the New York State Convention of school superintendents recently held in the city of Rochester.

Report on Agriculture.—The committee, to whom was referred the consideration of the subject of introducing the study of *agriculture* as a branch of education in our schools, respectfully report—

That, as *agriculture* is the art on which all other arts depend, and the profession in which the greater part of our population are engaged, its improvement and prosperity is a subject of the highest importance; and the committee are of the opinion that the time has arrived when the elements and scientific principles of agriculture should be taught in all our schools, especially to the older class of pupils.

The rapid progress which has of late years been made in those parts where the discoveries of science have been brought to bear on the improvement of agriculture, affords the strongest evidence of the importance of diffusing a knowledge of the principles upon which these improvements are based, among those who are soon to become the owners and cultivators of our naturally fertile, though much abused soil. There can be no doubt but that such knowledge, if properly imparted, would have a direct tendency to improve the practice of agriculture, and elevate the profession to that high rank in public estimation which it so justly deserves.

Your committee have perceived, however, that there are numerous difficulties connected with the subject, and that it requires more deliberate consideration than they have bestowed upon it, to devise the best means for accomplishing the object. Much can be done by the introduction of books on agriculture into the district school libraries. This object has received considerable attention from the New York State Agricultural Society, and premiums are now offered for the best essays for the purpose. There is still wanting a suitable *text book* on agriculture, for the use of schools.

In view of this whole subject, therefore, the committee beg leave to recommend this subject to the earnest consideration of this convention, and to submit the following resolutions:

Resolved, That this convention recommend to teachers, as far as is in their power, to impart instruction on agriculture, by occasional dialogues or conversations, and the reading of agricultural books and periodicals, so as to explain the principles of this art, and show its respectability and importance to themselves and society.

Resolved, That the convention deem it of the highest importance that our school libraries contain more works on the principles and practice of agriculture, suitable for the perusal of the young; and therefore we take pleasure in recommending to the trustees of school districts under our charge to purchase works of this character.

Resolved, That we will, as county superintendents, take the subject into consideration, and be prepared, at our next annual convention, to express our opinions respecting it, and to act decisively upon it, if deemed advisable.

Resolved, That a committee of three be now appointed to take this matter under their special consideration, and report thereon at our next annual convention; and that the State Agricultural Society be requested also to appoint a committee to confer with them.

A committee was appointed, consisting of Dr. Alonzo Potter, of Schenectada, Ira Patchen, of Livonia, Liv. co., and M. B. Bateham, Rochester.

From the Boston Cultivator.

CHANGE OF CROPS.

Messrs. Editors—In Ruffin's Survey of S. Carolina it is said, while advocating a change of crops, "Corn seems to need change of soil less than any of the great crops, and the many cases of success with which it has been raised for many years in succession on the same fertile field, have been triumphantly advocated by the opposers of rotation, as a certain and manifest proof, that a change of crop is not necessary; but even if this were true, as to this particular plant, it would not affect the general question. The hardiness and vigor of the corn plant on fine soil, may enable it to withstand the depredations of some of the several tribes of insects which it breeds and nourishes, and others, as the cut-worm, so fatal in other circumstances, may be destroyed by the continued tillage, and naked and open state of the soil."

Now, where the soil is fine, and every way suitable to the growth of the plant, other crops beside corn, are sown several years in succession with impunity. At Mr. Mark Cooper's farm, near the village of Enterprise, Lancaster Co., Pa., a second crop of wheat in succession is at present the finest in that wheat-growing country; and I was informed by the owner, it was his intention to follow it with another crop of the same! and on my remarking, I never before witnessed such liberties taken with the soil, he informed me of a crop of rye then growing in the neighborhood, the 27th in succession, not having received a spade-full of dung for 27 years! On visiting this field, I found a good crop, clear from rust and heavy in grain, and not a weed in ten acres! and when asked by the owner why he might not continue his *rotation*, as he jeeringly termed it, I confess I felt somewhat dum-founded, and could only answer, I considered the present an exception to the general rule. I plucked a sample of the crop, and present it to you as a specimen of the 27th crop of rye in succession, without any manure.

To the remark, that "cut-worms in corn may be *destroyed* by continued tillage and a naked and open soil," I beg to say, the cut-worm would not be found in corn, were it not planted in sward or sod land: they are the progeny of a species of beetle or other insects, which could never propagate its kind without the aid of dung, which is found in grass fields that have been fed by horses or cattle, and in this they enclose their egg or eggs, and sink them a given distance below the surface; hence, an autumnal or winter plowing of such land destroys them, by exposure to the rains and frosts of that inclement season; a doctrine which has at last met with the concurrence of every practical man amongst us. And a change in the common rotation, corn, oats, wheat, clover, for wheat, corn, oats, clover, will be quite effectual in putting a stop to its ravages. The observation, that corn or any other grain "breeds and nourishes insects," I must say is quite in opposition to my views on the subject. I believe that insects are destined to prey on the vitiated juices of the plant, which, instead of circulat-

ing, become stagnant and ooze through their pores; and it is on these putrid and extravasated juices, that the animals feed. Now we always see, even in the most blighting seasons, that some plants—those for instance that might be sheltered from a cold and blighting atmosphere—will be found to have escaped the general evil, while others are doubly afflicted by the malady; but if asked how these things can be accounted for, or by what peculiar means they were brought about? I can only answer, reverently, God knows!

Your subscriber, JAMES CORWIN.

June 30, 1844.

From the Boston Cultivator.

NEW MODE OF FARMING.

I pray you, Messrs. Editors, permit me to detail, what appears to me, a new mode of farming. It was communicated in the way of conversation with an honest old German, who informed me he had purchased a small farm of 70 acres in the neighborhood of the Lehigh coal region, where also he had charge of a lock on the canal; that the next year he should have a *taller* (larger) farm, and devote himself to its cultivation. I inquired if he would grow corn? 'Yes.' And wheat? 'Yes.' Oats? 'Yes, for the fodder, and cut it all up together, grain and straw.' Would he keep a dairy? 'No, only one cow for my wife, as I do not care for milk and butter.' Hogs? 'No, only one or two to eat up the waste about the house.' Then what stock would you keep? 'None in summer, but plenty in winter.' I then desired him to detail his plan, which he did in his quaint manner, as follows:

"I keeps no cow, no ox, no sheep, no hog all summer, nor plow much. All my land, so much as I can, I give to grass. Then, when my neighbors say, oh, my cows and my hogs get in my corn, and eat all up; I say I keeps no cow and no hog—I very comfortable about my fences; they cost me nothing, for I have no cattle to break them. But I makes the hay so much as I can, and my cornstalks so big as I can, and my oats so much as I can, and save all up for winter; a great barn and stable quite full, and the ricks in the yard. Then I watch my neighbors; for when I hear John Stone say, in the spring, oh, I got much grass, I must buy two cows, when he hant 'nough for one cow, I say to myself, oh, I buy your cows in winter, when you got no hay for them. So when he come and say, you buy my two cows 'cause you got plenty hay; I say yes, I give you five dollar a piece for them; and so I gets them, 'cause he got no hay nor nothing to give them. So I do with the rest of my neighbors, only I do not buy the bad cows, only the good cows what will have calfs; and they keep the bad cows 'cause nobody will buy them. So I keeps them well, and cleans them very nice, and makes them very fat and big; and when the little calfs comes, I gives them all the milk, and they grow fat and big; and then my neighbors comes in the spring, and wants to buy their cows again, for they got the grass and no cows to eat it; and so I sells them their own cows for 20 dollars apiece, and sometimes thirty or forty; but I keeps the calfs, 'cause I wants them for the butcher. And so I sells my neighbors their own cows again, *but I gets all the dung;* and as they gets no dung, they get no crops; while I gets all the dung, and the crops, and the profit too!"

Messrs. Editors, when I hear my neighbors inquire what course they shall adopt, so as not to follow exactly in the path which others are pursuing, I think of my old German friend who "gets the dung, the crops, and the profits too," and am led to ask, if there be any objection to the plan here pointed out.

RECIPES.

An excellent plan for preventing young fruit trees from becoming hide-bound and mossy, and for promoting their health and growth, is to take a bucket of soft soap, and apply it with a brush to the stem or trunk, from top to bottom; this cleanses the bark and destroys the worms or the eggs of insects; and the soap becoming dissolved by rains, descends to the roots, and causes the tree to grow vigorously.

It is said that a mixture of one ounce of saltpetre, and seven ounces of salt, applied on the surface of the ground, in contact and around the trunk of a peach tree seven years old and upwards, will destroy the worm, prevent the *yellows*, and add much to the product and quality of the fruit. Also, dress the orchard with the same mixture, at the rate of two bushels to the acre.

To have green peas in winter, take them when they are plenty, shell them, wash and scald in hot water, then drain, put them into bottles, and pour strong brine on them until they are perfectly covered; over this pour a thin layer of good salad oil, and cork tight, then dip the corks into melted pitch. The bottles should be quite full and kept upright.—*U. S. Practical Receipt Book.*

rom the Boston Cultivator.

COLLARS vs. YOKES.

MESSRS. EDITORS—How much has been said, but how little has been done on the subject of substituting the collar for the yoke in working oxen. That the collar can be made to supercede the yoke for all purposes, there is no question, and that it has been done to manifest advantage, there is no doubt. But there is just one thing more needed: it is for some one to fit up a handsome pair of Devons with a set of elegant harness; their collars fitting the hollow of the shoulder, so as to allow the free motion of the leg; their blind bridles like those for the horse, except not being furnished with bits for the mouth; with eye-flaps decorated with brass plates, bearing the name of the philanthropic owner, by which he would claim and retain the honor of being the first to introduce the humane custom into the country—a distinction enviable from the fact of being the first to advocate the cause of one of the most noble of our domestic animals.

But he who would do this, must have the means of carrying out the experiment; humane, with the determination to withstand opposition and prejudice; desirous to relieve the woes of a race of animals that have been bowed down to the earth and oppressed with the cruel yoke of bondage all their lives long; and then, if endowed with patience in the good work, I will guaranty him perfect success, and an inward satisfaction above all price.

And now, do you ask where such a person can be found? I answer, in Mr. Cheever Newall, of Dorchester, whose elegant place and fine animals designate him as he to whom we might look for the introduction of one of the most useful and important innovations of the age. Oxen, when harnessed in this way, are worked like horses; if single in a cart, the pad of the shaft harness rests on the back; if double in a wagon, two pairs of light shafts are used; while in plowing with the collar, they are equal in speed to the horse, and will be found to go through their labor with as little fatigue; their heads being free and more erect, they will not be liable to drop and die in hot weather.

In Mr. Colman's forthcoming notes of his agricultural tour in England, we shall no doubt find ample testimony in favor of the humane substitution here advocated; for he will daily witness many *teams* of oxen—no longer *yokes*—in the streets of London, taking over the pavements the heaviest loads, with the most perfect ease and facility; their feet shod, and their convenient harness enabling them to pass along the crowded streets without the least difficulty, or danger to the passengers, sure-footed and staunch in their draught, to a proverb. He will also have the opportunity of contrasting this mode of gearing with that now in use on some parts of the continent, where the wretched animals are made to draw by means of chains hung to a broad board affixed to their foreheads by straps passing around their horns!

Your subscriber, J. D.

Salem, Mass.

PROPER DEPTH OF SEED.

Various experiments have been tried to determine the proper depth at which seed should be put. The following is the result of an experiment with maize or Indian corn:

That which was planted at the depth of—

No. 1.	1	inch, came up in	8½	days.
2.	1½	" "	9½	"
3.	2	" "	10	"
4.	2½	" "	11½	"
5.	3	" "	12	"
6.	3½	" "	13	"
7.	4	" "	13½	"
8.	4½	" "	—	
9.	5	" "	—	
10.	4½	" "	17½	"
11.	6	" "	—	

The Nos. 8, 9 and 11, were dug up after 22 days, and it was found that No. 8 had an inch more to grow to reach the surface of the earth. Nos. 9 and 11 had just sprouted, and were short, and three inches below the surface. No. 10 came up in 17½ days, but the tender leaf remained only six days green, and then withered. There is no experiment which shows more clearly the advantage of a shallow planting in a soil not too loose and trodden down than this. The more shallow the seed was covered with the earth, the more rapidly the sprout made its appearance, and the stronger afterwards the stalk. The deeper the seed lay, the longer it remained before it came to the surface. Four inches was too deep for the maize, and must, therefore, be for yet smaller grain kernels.

Petri gives an experiment made on rye, with the following results. The first column shows the depth at which the seed was put; the second, the number of days that elapsed before it appeared above ground; the third, the number of plants that came up:

Depth.	Appeared.	Number of plants.
½ inch	11 days	⅞
1 "	12 "	all
2 inches	18 "	⅞
3 "	20 "	¾
4 "	21 "	½
5 "	22 "	⅜
6 "	23 "	⅛

The root stock forms itself next below the surface of the ground, and if we place the grain deep, it must first put its sprouts to the surface, and form its side branches in a nearer connection with the air. We never find that the sucker roots are ranged from below to above, but the contrary.

From the experiments of Ugazy, who tried 76, with different grains, it is clear that shallow sowing, if the seed is only so far covered as to sprout, and the germ is protected from immediate contact with the air, is preferable to laying the seed deep, because it springs up quicker, and acquires a stronger growth, and has hardier plants.—*Burger's Economy of Farming.*

From the Hamburg Indagator.

BUCKWHEAT.

Why is it that our planters do not cultivate buckwheat more extensively? We are obliged to send on to the North every year for a supply of this article, when it is so easily cultivated at the South. Who that has enjoyed a plate filled with buckwheat cakes of a cold winter's day, but did not wish that it were cultivated more in inithiis a ty. The grain not only makes a delicious nd healthy food for man, but it is useful for stock, poultry, and for bees.

Agriculturists tell us that this grain is cultivated on rough and hilly districts, and on light soils, and yields well on poor soils. That it will produce a good green crop to turn in for manure on their land when little else will grow. It flourishes best on a dry, mellow, loose, sandy soil. In the middle States, it is sowed in July, and is generally cut immediately after the frosts in October. One bushel of the grain is sufficient to sow an acre of land, though if the ground be rich, a less quantity will be sufficient, as it will branch out. For a grass crop nearly twice as much is sown. It may be sown for a green crop after a crop of rye, grass, early peas, or other crops.

ON FEEDING MILK COWS.

The following is an extract from a lecture recently delivered at Alnwick, England, by Professor Johnson, of Durham University, at the desire of the Duke of Northumberland, "on the feeding of stock."

"I have spoken of the various conditions of animals. I will now direct your attention to the milk of the cow. When an animal comes into the world, the parent gives it milk. The parent, then, must nourish its own body, and produce the milk besides. The cow gives a large quantity of milk as soon as the calf is born. And cows that give a large quantity of milk are in general characterized by striking peculiarities. Such an animal, an inexperienced eye would say, is poor and meagre and worth nothing; but when he is told to look at the large udder, and the conformation of the whole animal, fitted for the copious production of milk, he soon learns to change his opinion.

Now, what does milk contain? Curd, or casein, butter, sugar, and saline matter, as you will see on referring to the table. Therefore, if you would feed a cow with food that contains these ingredients in a large proportion, you must give her beans and peas, or you must give her some leguminous crop. Observe, the butter is derived from the fatty matter of the food; and some pastures, as you know, are calculated to fatten. These same pastures would give a milk rich in cream, or that would produce much butter, while others would increase the yield of casein, or would be adapted for the production of cheese. It is clear, therefore, that the constituents of the food must exist in the pasture. Now, you all know that milk is extensively used as food, and is raised for sale, either directly, as by the cow-keepers in our large towns, or in the form of butter and cheese, as in our dairy districts, or it is manufactured into veal. The object of the cow-feeder of the town, is different from that of the true dairy farmer.

His object is to produce a large quantity of milk; and he accomplishes that by feeding the animal upon succulent substances, and such as contain a large quantity of water. In some places, you know, they are said to have little scruple in adding water to it afterward. But they can avoid the odium of this by giving it in the food. Milk, of average quality, contains about 87 per cent. of water; but it is possible to increase the proportion to several per cent. more. Then there are the cheese districts, such as those of Cheshire and Ayrshire, and a different kind of food is made use of in these places from what is employed where milk only is required. If you wish the product of cheese to be plentiful, you must feed the cattle on clover, beans and peas, and other plants that contain a large quantity of casein. A rich milk may be obtained by feeding your cows upon clover, but you may obtain a very rich milk also by putting them early on beans or pease meal. But, if butter be the principal object desired, you must feed your cows upon food containing a large quantity of oil. Indian corn, as I said before, contains a great proportion of oil, and no doubt increases the proportion of cream. Some kinds of fodder also contain more fatty matter than others.

From this fatty matter the butter, as I have said, appears to be derived, and I think by using a little care, a milk rich in butter might be obtained by the use of oil-cake, without imparting any disagreeable taste to the milk itself, or to the cream obtained from it. Then in other places they are in the habit of manufacturing the milk into veal. The young calf it is necessary to feed on such substances as contribute at once to the growth of the bones, and to the laying on of fat. These substances exist in milk, and it may be necessary, at certain seasons of its growth, to give the milk skimmed, at others unusually rich in cream. Thus, in the neighborhood of large towns, where veal is much used, it is usual, when the animal arrives at an age when it ought to lap on fat rapidly, to give it the milk richer in cream, as well as a larger quantity of it. This is altogether a different process from feeding farm stock.

From the Albany Cultivator.

HINTS TO YOUNG MEN.

"Who aims at excellence will be above mediocrity; who aims at mediocrity will fall short of it."—[ANON.

Be industrious. We do not mean here the industry of the hands alone, but that perseverance in whatever we undertake, that is the sure precursor of ultimate success. Never allow the mind or the body to stagnate; activity is necessary to the health of both. Always have some worthy end in view, in whatever you undertake; remembering that to fail with good intentions, is more honorable than success in an evil cause.

Cultivate your mind. It is of more importance to the young, that their reading should be select, rather than extensive. One volume well understood, on any important topic, is better than half a dozen merely skimmed. There are many subjects of general utility, with which every man should have a partial knowledge at least; but it is one of the great faults of modern education to spend too much time on studies that rather burden and clog the mind, than strengthen and inform it for life's practical duties. Reading, or studying without some definite aim, is likely to lead to few useful results. How many men there are who have spent a large part of their lives over books, of whom it may be said, "they remember a mass of things, but nothing distinctly." It is possible to cram the mind with masses of indigestible materials, destructive alike to a healthy and a vigorous action of the intellectual powers. Such is not the cultivation of the mind required by a young farmer.

Be economical. No matter if your parents are worth millions, it is not the less proper that you should understand the value of money, and the honest, honorable means of acquiring it. What multitudes of young men, particularly in our cities, make fatal shipwreck of reputation, health, and eventually of property, by a neglect of this simple maxim. They are aware that their fathers obtained their wealth by habits of industry, but they are ashamed of the very name. They forget that wealth in this country passes rapidly from one to another, and that he who is rich to-day may be poor to-morrow; or that he who relies on wealth amassed by his father, may end his days in a poor-house. It is for the young here to say, whether by industry and economy he will secure competence and respectability, or by extravagance and idleness become a worthless beggar and sponging outcast.

Be just. In the course of life a man frequently finds his interests or his opinions crossed and thwarted by those from whom he had a right to expect better things, and the young are apt to feel such matters very sensibly. But be not rash in your condemnation. Look at their conduct carefully, and be just to the motives that prompt it. You may find, that were you placed in their position, the course you now condemn would be the one proper for you, and the one you would be under obligation to pursue. A little cool consideration would avoid much censoriousness.

Shun avarice. One of the most disagreeable characters on earth, is that of the grasping, avaricious, penurious man. Generosity is perfectly compatible with economy; and the means which enable some of our most noble-hearted, generous men, to do much to benefit and bless mankind, are obtained, not by close-fisted penuriousness, but by economy. The distance is not greater between the zenith and the nadir, than between the covetous and the economical man: the first banishes every just and honorable feeling from the heart, the other fosters and ministers to them all.

Determine to be useful. No matter what may be your condition in life, you have an influence, and that influence should always be exerted in a proper way. The young have no right to fold up their arms, bury their talent, and become the drones of the social hive. Aim high, but with prudence; act with determination and perseverance; let no obstacle drive you from the path of honor and duty, and you may be sure of eventual success. Riches are not within the reach of all: competence is; and the latter condition is preferable in every respect to the first. Remember the Deity helps those who help themselves, and that utility is the great end of human exertion.

From the Connecticut Farmer's Gazette.

DON'T KILL THE BIRDS.

Don't kill the birds—the little birds,
That sing about your door,
Soon as the joyous Spring has come,
And chilling storms are over.
The little birds—how sweet they sing!
O, let them joyous live;
And never seek to take the life
Which you can never give.

Don't kill the birds—the little birds,
That play among the trees;
'Twould make the earth a cheerless place,
Should we dispense with these.
The little birds, how fond they play!
Do not disturb their sport,
But let them warble forth their songs,
Till winter cuts them short.

Don't kill the birds—the happy birds
That bless the field and grove;
So innocent to look upon,
They claim our warmest love.
The happy birds—the tuneful birds,
How pleasant 'tis to see;
No spot can be a cheerless place,
Where'er their presence be.

From the American Agriculturist.

THE PHYSICIAN AN AGRICULTURIST.

Who can be a better farmer than the country doctor? With usually sufficient leisure on his hands to spend the necessary time in the cultivation or superintendence of his acres, more or less, and by profession, as he should be, a tolerable naturalist, chemist, and an observer of the physical laws, with the important advantages of daily observation of their husbandry, and continued and friendly intercourse among the farmers and gardeners of his neighborhood for many miles around him, no one has a better opportunity to excel as a farmer than himself. What but absolute want of taste, and a total absence of all observation and interest in the prolific bounties of nature, should prevent our country physicians from being our best husbandmen and stock-breeders? Of all the professions connected with rural life, commend me to that of the country doctor. I speak it with all possible respect and approbation, and for one I most humbly thank Dr. Stevens for bringing this subject before the public; and I wish now, some one would follow up the hint by a lecture on THE CLERGYMAN AN AGRICULTURIST. After this should come the SQUIRE. What a glorious trio. I cannot help apostrophizing them in the language of the poet:

Parson, doctor, and the squire!
Best adviser,
Best prescriber,
Best decider,
Why not *best* of farmers then?

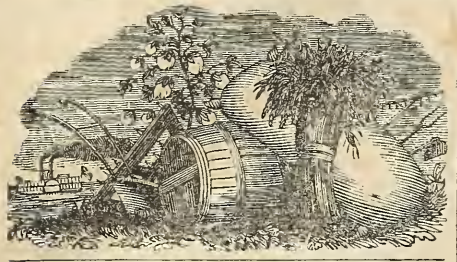
PUTNAM.

From the Albany Cultivator.

TO PRESERVE TOMATOES.

Dip the ripe tomatoes in scalding water, peel them, and divide them into two, or, if very thick, into three slices; lay them on plates, and put them into the oven after the bread is drawn; in 48 hours they will be perfectly dried. Put them in paper bags, and keep in a dry place. When wanted for use, dip them in cold water and lay them on a dish to swell, and in a mince or stew, they are almost equal to the fresh fruit. If you wish to make tomato sauce, add a little water to cook them in. They are very good to eat out of the hand in the dry state.

☞To preserve your horse dung, mix it with vegetable mould, and cover it well with the same.



WEDNESDAY, AUGUST 7, 1844.

☞We welcome with much pleasure the annexed letter from our correspondent, and firm and steadfast friend JOHN FARRAR, and we avail ourself of this occasion to return him our thanks for his numerous and continued manifestations of friendship, since we entered upon the experiment of publishing an agricultural paper in Georgia. He was among the first to take us by the hand and bid us persevere, and he has never faltered in his efforts to secure our success.

There are also many others, who have on all occasions manifested an unflaging interest in our behalf, to all of whom we shall ever feel grateful.

—

STANFORDSVILLE, Putnam county, August 31st, 1841.

Messrs. Editors:—In the last number of the Southern Cultivator, you congratulate your readers on the subject of the increasing number and character of your correspondents, which affords me a great deal of satisfaction to find is a fact. This is as it should be. Is not Georgia as able as any other State to sustain an agricultural paper? I, for one, will say she is. If our planters, as yet, are not able to give an account of as many experiments as to the management of manures, &c., as the Northern farmers are, by applying themselves to the subject, they may, in a few years, be able to do so.

At this time, however, they are fully able to sustain you, Messrs. Editors, in your worthy undertaking, in being the first to hazard the publication of an agricultural paper in this State. It does me good to receive your paper; and still more so, when I can find communications in its columns, written by Georgians; which leads me to understand that there is an increasing interest getting up for the prosperity of your paper. I am at a loss to understand why any planter should value one dollar higher than the advantages of reading an agricultural paper for one year; even if he did not intend to be governed by any of the new plans laid down in farming, there is always enough other matter to be found in such a paper that is well worth a dollar.

In the same number of your paper, you speak of me in rather flattering terms, as an early friend and correspondent, and inquire why I have been so long silent? My friendship, &c., as a correspondent—humble and feeble as my efforts were, in my own estimation---were put in requisition solely for the advancement of your paper; knowing, as I did, that any undertaking of the kind was more in need of help while in its infancy than after it had grown in strength; and if my efforts have been of any advantage to your enterprize, I can but feel glad that I have thrown in my mite. I hope the number of your correspondents will continue to increase, and that they will give the county and post-office from which they write, as I like to know where the different writers live.

As to my silence as a correspondent, I can say to you, that it has not been from a diminished zeal for the prosperity of your paper, nor from a lack of desire to see agricultural improvements progressing, but rather for the want of a subject that I thought would be interesting to your readers; though I think it likely you will hear from me occasionally, before the year is out. I have had a thought of making a request of your subscribers in different parts of the State, to give an account of the crops in their different counties. Such a statement would no doubt afford some satisfaction to the readers of your paper. I will therefore speak of the crops in this section, as correctly as my knowledge admits of.

Corn and Cotton are both better than an average crop thus far. The corn is safe, as we are half done pulling fodder. Cotton, as well as corn, is more forward than common. The wheat and oats crops are both short—though the quality of the wheat is tolerably good.

I am, dear sirs, yours respectfully, &c.

JOHN FARRAR.

AGRICULTURAL EXPERIMENT.

Mr. J. B. LAWES says it would contribute much to advance our knowledge of the action of artificial manures, if the experiments were continued upon the same piece of land during successive years. The problem would then be solved whether a plant can supply itself, year after year, with organic matter, when inorganic matter only is supplied. I found that the ashes from 5 cwt. of dung, produced an equal weight of turnips as 5 cwt. of dung unburnt; but whether the succeeding crops will be as good, remains to be proved. The expense of carriage prevents the use of dung which accumulates in large towns, except by those farmers who live within a few miles; but if the ashes proved equally beneficial, the weight would be reduced nine-tenths, and the expense of carriage almost completely removed.

GUANO.—The price of this celebrated fertilizer of the soil is quoted in the market report of the N. Y. Tribune, at 3½ cents per pound. A cargo of 400 tons was recently landed at Baltimore.

☞Capt. Eldridge of the schooner Emeline, says the N. Y. Farmer, has arrived at Stonington with a cargo of African guano. It can be had in New York at about $50 per ton.

☞Asa Barton, in the Maine Farmer, says that he converted straw, cornstalks, and potato tops, into good manure in fourteen days, only by heaping them together, and mixing unslaked lime with them. He used six casks of lime, and had fifty loads of good manure. The loads measured a large half cord each.

☞We see it stated that a family were recently poisoned by eating rhubarb leaves as greens. The stalks are harmless, but the leaves are said to contain oxalic acid.

A USEFUL PLANT.—The sun-flower is perhaps destined to become one of our most valuable agricultural products. One hundred pounds of the seed afford forty pounds of oil. The refuse of the seeds after expression, furnishes an excellent food for cattle; from the leaves of the plant cigars are manufactured of singular pectoral qualities; the stalk affords a superior alkali, and the comb of the seeds is a choice dainty for swine. So says the Hon. Mr. Ellsworth.

HOME.—Keep your store of smiles and your kindest feelings for home: give to the world only those which are to spare.

☞The tropical fruit, the Prune, has been successfully propagated in Tuscaloosa, Alabama.

☞Nature works for the agriculturist while he is sleeping.

From the Albany Cultivator.

KNOWLEDGE FOR A FARMER.

A comparison of the several kinds of vegetable food, generally used for the purpose of nutrition, cannot but be useful, as showing the farmer what quantity of one, may be substituted for another. The following table, given in Burger, from Petris's work on the "care and keeping of sheep," may be considered as a list of equivalents. It will show that while of some an animal could scarcely eat enough to support life, of others the nutriment would greatly exceed what the wants of the animal demanded.

100 lbs. sweet, well cured meadow hay, containing 50 lbs. of nutritious matter, are equal to		
90 lbs. clover hay,	100 lbs. of which contain	55½ lbs. nutritive mat.
90 lbs. tender vetch hay,	do	55½ lbs. do
90 lbs. tender lentil hay,	do	55½ lbs. do
360 lbs. wheat straw,	do	14 lbs. do
500 lbs. corn straw,	do	10 lbs. do
180 lbs. barley straw,	do	27½ lbs. do
200 lbs. oat straw,	do	25 lbs. do
200 lbs. pea straw,	do	25 lbs. do
190 lbs. millet straw,	do	36½ lbs. do
200 lbs. horse bean straw,	do	25 lbs do
180 lbs. chaff,	do	27½ lbs. do
200 lbs. potatoes,	do	25 lbs. do
200 lbs. cabbage turneps,	do	25 lbs. do
200 lbs. yellow turneps,	do	25 lbs. do
400 lbs. white turneps,	do	12½ lbs. do
300 lbs. beets,	do	16⅔ lbs. do
560 lbs. white cabbage,	do	10 lbs. do
82 lbs. Indian corn,	do	95 lbs. do
82 lbs. wheat,	do	95 lbs. do
55 lbs. rye,	do	90 lbs. do
61 lbs. barley,	do	82 lbs. do
64 lbs. buckwheat,	do	78 lbs. do
71 lbs. oats,	do	70 lbs. do
54 lbs. peas,	do	93 lbs. do
54 lbs. horse beans,	do	93 lbs. do
83 lbs. wheat chaff,	do	60 lbs. do
105 lbs. wheat bran,	do	48 lbs. do
109 lbs. rye bran,	do	46 lbs. do

To keep in equally good condition, it appears from various experiments, says C. W. Johnson, that a horse will consume as much food, besides grain,

As	8 sheep,
A cow as much as	12 "
A fattening ox as much as	10 "
A 3 year old heifer as much as	8 "
A 2 " "	6 "
A 1 " "	4 "
A calf as much as	2 "

GUANO.

The British papers represent the guano business to be about the best going. A vessel of 500 tons was ten weeks on its passage to Africa, seven in loading, and nine in returning to Liverpool. The guano itself cost nothing. The proceeds of the cargo were £4,000, or $20,000; the expenses, $2,000. A British man-of-war has been ordered to the coast of Africa, for the protection of this trade.—*Boston Post.*

The scientific and enterprising agriculturists of Europe, are availing themselves of every artificial expedient to make their land productive. They accumulate the refuse and offal of the world for this noble purpose. Several years ago, we remember to have read that the bones of the thousands slain at Waterloo, which were consuming by exposure to the open air, were collected and shipped to Great Britain, there to be ground into powder and used as manure. Liquid manure, the drainings from stables and cow-pens, is the most valuable of all manures; yet there is not one farmer in twenty, in this country, who saves it.—*Far. Monthly Visitor.*

MOSCHETOES.—Parley's Magazine says, to get rid of moschetoes, take a few hot coals on a shovel or chafing dish, and burn upon them some brown sugar in your parlors and bed rooms, and you effectually banish or destroy every one for the night.

From the Hamburg Indagator.

THE SUNFLOWER.

The people at the South are certainly the most neglectful beings of any other in the Union. Many species of vegetation which grow spontaneous, and without care, possess rare and useful qualities, yet they are passed over as mere weeds, without persons even taking the trouble to ask of their properties. This is the case, however, where Nature has profusely scattered her blessings—we take that which pleases us most, and let the balance go for their worth. For instance, the sunflower which grows on rich and common soils, without cultivation, is of great importance to man. The seeds make excellent food for poultry, and will give a good yield of oil; and after the oil has been expressed from the seed, valuable cakes may be made from the residue, which may be used for various purposes; and acts as an excellent manure for vegetables.

The Palma Christie is another valuable growth, though greatly neglected by Southerners. Our best castor oil is made from its berries. The manufacturing of this article is about to take place in this part of the Union, as we understand from good authority, that a gentleman in Georgia has already tested the experiment, and the product warrants a renewal of the experiment.

From the Western Farmer and Gardener.

PEACH TREES.

See to them. At this season, the worm at the root is very busy, and many trees which you suppose in fine health and vigor, will begin to curl their leaves and grow yellow. Put not your trust in ashes, coals, or tansies. A friend of ours was living in the pleasing delusion that tansy was saving his, and was disagreeably surprised when the writer, removing the ground for an inch in depth, showed him the gum and dust. Follow the worm with a knife, and kill him. You will often find three or four in a young tree; presently your trees have the yellows and die, and you become satisfied that the soil and climate do not agree with them. The yellows very often comes from the worm—some say, always. After taking out the worms, the stem, for a foot above and two or three inches below the ground, may be wrapped with cotton batting, or plastered with a mortar made of lime, sand and ashes.

A GOOD REASON.—A few days since a grand jury out South ignored a bill against a huge negro for stealing chickens, and before discharging him from custody, the Judge bade him stand a reprimand. He concluded as follows:

"You may go now, John, (shaking his finger at him,) let me warn you never to appear here again."

John, with delight beaming from his big white eyes, and with a broad grin, displaying a row of beautiful ivory, replied:

"I wouldn't bin dis time, Judge, only de constable fotch me!"

GROWING MUSTARD FOR FEED AND ENRICHING SOILS.

I beg to hand you the following statement on the use of growing mustard for feed, or to plow in as a preparation for a wheat crop. It is very palatable to all kinds of cattle, and I believe very wholesome. I think it far preferable to buckwheat, or any other vegetable with such rapid growth. I sowed five acres on the 11th of July last, on rather inferior land, of a light gravelly soil with chalk subsoil, where early turneps for wheat had failed. It should be drilled 5 inches apart, with 12 pounds of seed per acre. On the 25th of August, I had measured portions cut in different parts of the field, and weighed, which, on a fair calculation, yielded 6 tons per acre—it was in full bloom—and the next day I plowed it in; which I consider, being full of vegetable matter, must be an excellent dressing for a wheat crop. I would invite any friend to make trial of mustard on better land than mine; the expense being so trifling, compared with buckwheat, which is 5s. per bushel, and requiring 2¼ bushels per acre, would be 12s. 6d., whereas 11 lbs. of mustard seed, at 2d. per lb., the price it is now selling at, would be 2s. per acre.—*Eng. pop.*

From the Farmer's Cabinet.

CUTTING GRAIN EARLY.

We are satisfied that grain is very often left too long standing uncut in the field. The risk of injury from storms is increased—it does not handle so well, either in cutting, binding, loading, or stacking—and shatters out more. The opinion is pretty well established, that when wheat or rye is cut early—we mean before the grain is entirely hard, it makes quite as much, and whiter flour, than if left till the usual time. Since writing the above, we happened to read it to an experienced miller, who is also a good farmer. He says that he is well satisfied that early cut grain—that which is apparently quite green—will really yield more flour, and is worth several cents a bushel more than that which is suffered to stand till the berry is thoroughly hardened.

LIABILITY OF A HUSBAND.—*Lane vs. Ironmonger.*—This was an action, tried in the Court of Exchequer on Monday, at the instance of a milliner in Aldersgate-street against a corresponding clerk in the house of Rothschild for £52 10s. 6d. for millinery supplied to his wife from May to December last.

The delivery of the goods, and the reasonableness of the charges were distinctly proved, but it was contended on behalf of the defendant, that he was only liable for necessaries for his wife, and family, and not for any other debts which her extravagant whims induced his wife to incur, without his knowledge and consent. In support of the defence, there was evidence that the defendant and his family lived in a small house at Hornsley, kept two female servants, and that his income as clerk at Rothchild's did not exceed £300 per annum. It appeared however, that Mrs. Ironmonger had an income of about £400 a year settled on her for her separate use. The bill for which the action was brought contained charges for ten new bonnets, and nine cleaned and altered, and also a charge of forty-three pairs new kid-gloves. It also appeared, from the evidence of Mrs Robbins, a milliner and dressmaker in the neighborhood of St. Martin's lane, that she had supplied the defendant's wife with goods between May and November 1843, to the amount of £50, which had since been paid by the defendant. The defendant now paid £15 into Court, and denied his liabilities for any greater sum.

The Chief Baron told the Jury that a husband was only liable for goods furnished to his wife, when his authority was given expressly, or was to be implied. Perhaps a jury would be warranted in implying that a wife, living with her husband, was authorized by him to order necessary clothing for herself and children. It was for the jury to say, however, if nineteen bonnets and forty-three pair of gloves, within a period of seven months, could be considered necessary for the wife of a clerk with £300 per annum.

The jury, without a minute's hesitation, returned a verdict for the defendant.—*English Paper.*

CONTENTS OF THIS NUMBER.

Communications.

Emigration,....121-122
Cultivation of Cotton,....122-123

Selections, Extracts, &c.

Overseers, No. 2,....123
Agricultural Errors,....123
Knowledge is Power,....123-124
Fattening Turkeys,....124
Agriculture in Common Schools,....124
Change of Crops,....124-125
New Mode of Farming,....125
Receipts,....125
Collars vs. Yokes,....125
Proper Depth of Seed,....125
Buckwheat,....125
On Feeding Milk Cows,....126
Hints to Young Men,....126
Don't Kill the Birds,....126
The Physician an Agriculturist,....126
To Preserve Tomatoes,....126
EDITORIALS, ETC.—Agricultural Experiment; Knowledge for a Farmer; Guano....127
How to Kill Moschetoes; The Sunflower; Peach Trees; Mustard as a Fertilizer; Cutting Grain Early....128

BACON'S LARD LAMPS.—A new article, superior to all others for this purpose, emitting a good clear light without smell or smoke, and at an expense, counting Lard at 8 cents a pound, of about a quarter of a cent an hour.

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Seed Wheat,
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VOL. II. AUGUSTA, GA., AUGUST 21, 1844. No. 17.

SELECTIONS, EXTRACTS, &c.

EXTRACT FROM RUFFIN'S SURVEY.

Cause of the Rust in Cotton—Corn, Rotation of—Ravages of the Insect—The Pea Crop: its advantages as a rest or manure crop under a burning sun—The Sweet Potato—Grasses—Clover, etc.

The *rust* of the growing cotton is one of the most general and most destructive diseases to which that crop is subject. Sundry causes are alleged for this disease, some or all of which may truly be auxiliary or even inducing causes to the main one, which (according to my general position before stated) I take to be the depredations of myriads of very minute insects, to which the green cotton plant furnishes their best, if not their peculiar food. Other circumstances, of weather or soil, at different times, may serve to increase or check, or even prevent the depredations of these insects; but the circumstances which increase their injurious effects, could not operate, unless the insects were present. And it may be presumed that they would not be present, or be very few in number, if the preceding crop had not been cotton, but some other crop on which these insects could not live. In confirmation, I understand that cotton is rarely attacked by rust, when it does not immediately succeed cotton. The other diseases of this crop may be ascribed to other tribes of insects; and the means of prevention, either partial or effectual, would be also a change of the continued succession of cotton, and the intervention of a condition of the soil as unlike as possible to that under cotton culture.

Corn seems to need change of soil less than any other of the great crops; and the many cases of success with which it has been raised for many years in succession on the same fertile field, have been triumphantly adduced by the opposers of rotation, as a certain and manifest proof that a change of crop is not necessary. Even if this were true, as to this particular plant, it would not affect the general question. The hardiness and vigor of the corn plant on a fine soil may enable it to withstand the depredations of some of the several tribes of insects which it breeds and nourishes; and others (as the cut-worm, so fatal in other circumstances,) may be destroyed by the continued tillage and naked and open state of the soil. But though, by such or other means, land may continue to produce corn in long succession, much better than other crops so continued, still this is not even an exception to the general rule of the necessity for rotation. On the rich alluvial low grounds, subject more or less to freshes, where corn is usually the sole and annually recurring crop, it is true that heavy growths continue to be raised. But it is said, that in the most favorable seasons, there is a considerable proportion of rotten grain, even when not exposed to, or injured by water. These entirely rotten ears are often among the largest, and the product of flourishing stalks; and their unsound state may not be suspected until they are stripped of the enveloping shuck. This, and perhaps other inflictions of such crops, must be caused by the ravages of corn-bred and corn-sustaining insects. Yet this kind of land is not entirely without change of condition. The rank cover of weeds and grass which follow the last tillage of the corn, serves in some measure as a green shading and manuring crop. And even the inundations from freshes, which occur every year, however injurious in other respects, produce such great change of condition, that they may destroy or remove whole tribes of insects.

A stronger confirmation of this general position in regard to corn, I have learned on information from the proprietor of a piece of land in Virginia, with which I am personally acquainted. It is a large field of deep, mellow, light soil, very rich, high and level land, and so peculiarly adapted to the growth of corn, that the proprietor thought fit to keep it under that crop every year. It was so cultivated for thirteen years in succession; peas being planted with every crop, which, with such supplies as were afforded of other manure, maintained the high fertility and product of the land. But though the quantity of corn produced was not perceptibly reduced, the rotten portion (and rotten without any apparent cause) continued to increase, until it reached so large a proportion of the whole product, and the evil was of so regular occurrence, that this peculiar mode of cultivation was from necessity abandoned, and the ordinary previous plan of rotation was resumed.

But besides this important consideration, of certain tribes of destructive insects being sustained by some certain condition, and still more by the increased continued same condition of a field, and destroyed by a thorough change of that condition, such changes are better for the more complete eradication of some of the worst weeds, and still more for the better product of the cultivated crops. Plowing or stirring the soil, however necessary to be well done while the growth of a crop needs it, is hurtful to general production, if continued year after year, without cessation. Perhaps the growth of all crops may require intervals of rest and consolidation of the soil; and it is certain that some crops, which prefer a soil of firm and close texture, (as clover and wheat,) cannot be as successfully raised upon soils kept long before under tillage and hoed crops.

And while for some purposes of tillage or product, there may be required a partial consolidation of soil, others may be best forwarded by very deep and thorough working. And two crops which are peculiarly favored by the climate of South Carolina, and which are among the many great blessings of this region, serve admirably for these opposite purposes. These are field peas and sweet potatoes, which crops, extended as may be their culture already, and great their products, have not yet been duly appreciated in respect to all their benefits.

The pea crop, sown broad-cast, is an admirable rest or manure crop—giving shade, moisture and consolidation to the soil—and serving, by the sudden and great change of condition from any clean tillage crop, to remove or lessen the foulness of land, both of insect and vegetable plagues. Such I have known in my own practice, to be the highly beneficial operation of this crop, even under the much less congenial climate of Virginia; and much better must it serve in South Carolina, where not only are the climate and soil more suitable, but where the want of a crop so operating is far greater.

The length and heat of summer in this region, greatly increases the value of the pea crop. Being generally planted among the growing corn, and at a late period of its growth, the peas have enough time and sun to cover the ground well, and to mature, after the corn ceases to grow or to shade the land. This peculiar benefit of a southern climate, in regard to peas, is generally appreciated and availed of; and in this, some approach is made to an alternation of crops. Another and greater advantage, wherever wheat or oats are sown, is that the hardy black or red pea may be sown with these crops respectively, either late in autumn, or early in spring, and will often produce a good manuring green crop after the grain crop, at no more cost than the sowing of the peas. This process is, as yet, new, and so limited in extent, as to be deemed merely an experiment, of which the result is not fully determined. I know only of Mr. Wm. K. Davis, of Fairfield, and Maj. J. Littlejohn, of Union, who have, for several years, made the experiment, and so far successfully. And their object was not to use the secondary crop of peas, for what I deem its main value, that of being given to the field as manure.

These hardy and thick-skinned peas, if left on or covered in the ground, will not rot from all the cold and wet weather of winter. The danger to be feared and guarded against, is from the occurrence of a warm spell, which would induce sprouting, and consequently, the killing of the peas by succeeding cold weather. The peas grow so slowly at first, as not to be in the way of the covering grain crop; but start rapidly as soon as the latter has been removed. On September 1st, I saw a field of Maj. Littlejohn's, which had borne wheat this year, and was then under a second growth of black peas, too thin, indeed, generally, but of well advanced growth, and which promised a valuable manuring cover to the land. No seed had been sown for this crop. It sprung entirely from the peas grown there the preceding year among corn, and which, though the vines were pulled up and the crop removed as usual, from the shelled and wasted seed left on the ground, this crop was produced the succeeding year.

In the sweet potato, this country possesses a root more valuable in product, than that of any root crop of more northern climates, highly and deservedly as root crops are there prized. And potato culture, so far as it extends, ought to make an important and peculiarly valuable part of a general scheme of rotation, because of the peculiar growth of the crop, and the peculiar condition in which it puts the land. The sweet potato, though reported to draw heavily upon the soil, as do all root crops, yet, as one of the broad-leaved plants, it must draw largely from the atmosphere also; and as it can be so cheaply planted, (by slips) and easily tilled, perhaps this plant might even be profitably used as a manuring crop. But, even when the roots are removed for use, and (as usual) hogs turned in to eat the remnants, the deep growth of, and digging for the roots, also the thorough and deep rooting by the hogs, produce a condition of deep and perfect tillage, which is rarely attained in any other case, and might be most beneficially made the preparation for some other crop requiring very deep plowing and tilth to prepare for its growth.

Perennial, or other permanent grasses, of which, doubtless, there may be found some peculiarly suited to this warm climate, would still more serve to give the great benefits of changed condition to the fields, independent of the much needed benefits of grass husbandry for the feeding of live-stock, and giving rest and manure to the land. The grasses whose value has been

fully established by long experience in more northern countries, should be tried—not because they are from the north, (which in itself is a strong objection,) but merely because their good qualities are known, and possibly some of such grasses may as well suit a more southern clime. And such, I trust, is red clover, the best of all green and manuring crops. For although this was long held to belong to the north only, I have fully experienced that its locality and the perfection of its growth are fixed much more by peculiarity of soil, than by latitude. Not more than twenty years ago, it was as general a belief in lower Virginia, as now in South Carolina, that there the soil was too scanty and the sun too hot to raise red clover. But since marling and liming have made many of these soils calcareous, it is found that neither the sandy soil nor hot and dry climate forbid the raising excellent and profitable crops of clover. And so hereafter it will be found in South Carolina.

SOUTHERN AGRICULTURE.

[Extracts from an Address on the Agriculture and Husbandry of the South, delivered by Gen. JAMES HAMILTON, before the Agricultural Society of Fort Mitchell, Ala.]

Agriculture may be said to be the kind mother of us all, the source which sustains life, supports nations, and forms the *pabulum* of the commerce of the whole world. It is not surprising, that in the exuberant poetry of ancient Mythology it was deified, and that Ceres was crowned with the most fragrant and verdant garlands which grew in her own gardens, as the most propitious and blessed among heathen deities. The old Romans, who were certainly not only the greatest warriors, but the most profound politicians of their time, paid such honors to this art, that they deemed the highest praise they could accord an individual, was to say, "that he had cultivated well his spot of ground." It is a science, too, which has not been stationary for a single instant, since the moment when our first parents were ejected from that garden, "whose rich trees wept odorous gum and balm," ejected with the penalty that they should earn their bread by the sweat of their brow, though which, by the clemency of God, man has created for himself, by his own industry, a second paradise. In many of the sciences and arts, we have made no progress since the period of a remote antiquity. In poetry, Homer stands yet as an unapproachable model, whilst the statuary of Phidias is without a rival. But agriculture is daily adding to the garners of knowledge, as well as to her granaries of production.

* * * * *

Agriculture did not, however, reach the era at which it received its great and quickening impulse, until chemistry, as an experimental science, rose as its handmaid out of the mysticism of alchymy. By this science, we have learnt "the mode of investigating the composition, and studying the source from which plants derive their nourishment." By the chemical composition of manures, we have learned the true philosophy of their application, and have given to what was before vague and often unsatisfactory experiment, scientific precision and systematic arrangement.

"This great epoch of improvement received its acquisition at a comparatively recent period, from Sir Humphrey Davy's great work on Agricultural Chemistry, since which the science has been steadily progressing, and it may well be said, by its agency, we have realised the aspirations of a benevolent patriotism, by raising two blades of wheat where but one formerly grew.

* * * * *

The value of those staples we prepare for market, cannot well be over-estimated; but every good planter must look to his granary and meat house, as the source for making them, and as, indeed, the source of the solid strength of his plantation. With this view, we should ascertain the best modes of cultivating corn, potatoes and peas, and all the other leguminous and succulent plants; to gather the best means of rearing the most improved stocks, both of cattle, hogs and sheep. Nor ought we to be unmindful of the policy of raising our own horses and mules—a subject too much neglected by the Southern planter. But to accomplish all these objects, we ought to bear in mind, that the great source of production is the earth; that in order to keep her in a kind temper for yielding, we must pay her tribute without stint; that no system of agriculture is worth the expense of its maintainance, that does not look to a constant and unremitting renovation of the soil, through the judicious application of the most fertilizing manures. In this career of labor most of us are engaged, and it is for the purpose of discussing and recording the knowledge we may acquire in this our especial avocation, that this Society has been formed.

* * * * *

Having disposed of these preliminary considerations, I now propose to say something of the agriculture and husbandry of the South. I shall begin first with that staple, which is the great article of our commerce, and as it has not unaptly been called the pacificator of the world, because its necessity to the industry of the greatest belligerent in the world, holds her in check. Within the span of human life, a plant which was cultivated as an object of horticultural curiosity, has become the first of our products, and which, in its aggregate and average yield, has reached, in our country alone, the enormous amount of two millions five hundred bales per annum. By the extraordinary skill which has attended its cultivation, the production of this staple has probably exceeded the point of its consumption, and if we are not able, in the recently opened markets of China, to find vent for the surplus, prices may probably, for a time, fall below even the cost of production. It would seem, therefore, where there is an excess of production, that the policy is questionable, to treat of the best mode of augmenting the production of an already over-gathered product. But the axiom in political economy, to produce as much and sell as high as you can, applies as well to this article as any other, and although its production has greatly increased, yet a steady augmentation of the population of the world, and a consequent highly enlarged consumption of this staple will, before long, restore the equilibrium between the demand and the supply. I think it may be assumed as a postulate, that about as much cotton is produced now as can be gathered, but I am equally certain, by the improved mode of manured and checked culture, that half the land now in cultivation will give the same return. In other words, I believe five hundred acres of cotton, in the new mode of its cultivation, will produce as much as a thousand in the old. In order to embark in this recently recommended culture, it is admitted, that a large and accumulating stock of manure is necessary. It is, however, to be remembered, that the seed of one crop will nearly manure one half of the succeeding one, by resorting to the check culture, and by carefully littering and stabling our working animals and stock the whole year round, an amount of compost to manure the other half may be made. But after all, the great magazine for restoration and improvement of our soils, is at our own doors, through the region of country we occupy. Marl constitutes a never failing source of renovation. It renders porous soils more compact, and clay soils more friable, and is the most powerful agent yet discovered for decomposing vegetable matter, and converting it at once into manure. It is in this last particular it performs its most beneficial office. It has been found equally as fertilizing to cotton as to any of the cereal or root crops. Virginia has been renovated by its use. It has checked emigration in that State, doubled the product of the counties in which it has been used, and very nearly increased the price of farms in the same ratio. Yet the marl in Virginia does not average more than 60 per cent. of the carbonate of lime, its constituent element of usefulness, whilst the marl of Georgia and Alabama reaches nearly 90 per cent.—a vast difference in our favor. Let every farmer commence at once a search for that valuable mine on his farm. It is easily detected by its brown and greenish incrustation, in which are imbedded small fragments of sea-shells. Mr. Ruffin, to whom the South owes a large debt of gratitude for his researches on this subject, says, that "when any earth or stone is suspected to be marl, if it be calcareous, the easy and ready mode to test it is to apply a few drops of muriatic acid or any other strong acid. Twenty-five cents worth of muriatic acid would be enough to test thus, one thousand specimens. If no other acid be at hand, strong vinegar will serve, provided, if the specimen be very hard, it be first pounded or crushed. If the earth in question is calcareous, (as marl or limestone,) such application of acid will produce (by the disengagement of carbonic acid gas,) an immediate and violent effervescence, which it will be impossible to mistake. A mistake, however, *is* frequently made by new experimenters in this manner. If the acid (as indeed would water) be poured on dry clay, or earth not calcareous, the atmospheric air enclosed in the pores or crevices, will give place to the liquid, and escapes in air bubbles, which may be mistaken for a very slight disengagement of carbonic acid gas. The moistening of the earth with water, before touching with acid, will guard against this slight source of error. This testing by acid, decides as to what is calcareous or not, but of course does not distinguish between natural and artificial formations; and for manure, the latter, so far as they may hold out, would be just as serviceable as the former, provided they are as rich. Therefore, when the character of any earth has been tested, and found to be calcareous, the next examination needed is, (not a chemical analysis of a specimen of the first spade-full,) to ascertain whether the quantity or extent be considerable, by digging and removing the earth and applying it as manure. Nearly all the artificial deposits, (indigo vats, transported limestone, or other kind,) which I have been called to decide on, might have been dug through and exhausted in half an hour, and the most extensive of them would not have supplied a single cart for three days. Therefore, in all such cases of doubt, after ascertaining the earth to be calcareous, let the proprietor put a spade and grubbing hoe to work, and a cart if need be. The longer the supply may last, so much the more to his profit, and he will not fail to learn, either in a few minutes or a few days, whether the deposit be natural and abundant, or artificial and of course very limited in extent."

In many parts of South Carolina, where marl has been applied, the cotton crops have been nearly, if not entirely, duplicated; and although our soils are less worn than her's, it behooves us at once to commence a resort to this great mine of agricultural wealth. It ought at once to constitute an object of our Society, to obtain detailed instructions for its use and application. It is not, however, alone by the use of manures, that our cotton crops are to be increased—the great elements of solar light and heat are no less essential. Hence our cotton rows ought invariably to run south and north; that not only the least amount of shade should be cast on the plant, but that as our winds prevail in the summer months, the highest amount of atmospherical nourishment may be given to the plant. The necessity of this will be manifest, when it is recollected how much atmospherical nutrition the cotton derives from absorbents of its redundant foliage. I believe, moreover, after the full moon in July, the perpendicular stem of all cotton over four feet and a half high, should be topped, and the two or three of the long lateral branches on the full moon in August. I am satisfied that in rank and wet seasons, we should make at least one-third more to the acre by adopting this process. We have the authority of Liebig for this phenomenon in the physiology of plants. In his great work on organic chemistry, he says, "the amount of food which young plants can take from the atmosphere in the form of carbonic acid and ammonia, is limit

ed; they cannot assimilate more than the air contains. Now, if the quantity of their stems, leaves and branches, has been increased by the excess of food yielded by the soil at the commencement of their development, they will require for the completion of their growth, and for the formation of their blossoms and fruits, more nourishment from the air than it can afford, and consequently they will not reach maturity. In many cases, the nourishment afforded by the air under these circumstances, suffices only to complete the formation of the leaves and branches. The same result then ensues as when ornamental plants are transplanted from the pots in which they have grown, to larger ones, in which their roots are permitted to increase and multiply. All their nourishment is employed for the increase of their roots and leaves; they spring, as it is said, into an herb or weed, but do not blossom. When, on the contrary, we take away part of the branches, and of course their leaves with them, we thus prevent the development of new branches, an excess of nutriment is artificially procured for the trees, and is employed by them in the increase of the blossoms and enlargement of the fruit. It is to effect this purpose that vines are pruned."

In an alternation of crops, we ought likewise to look, with the occasional fallowing of our lands, as a source for their steady improvement. By a system of fallow, the lands for a thousand years, as in the vicinity of Naples, have been kept in constant heart, whilst an annual change of plants from those with, and those without surface roots on the same land, has been found to produce no deterioration in the fertility of the soil, after years of uninterrupted culture.

The same high authority to which I have just referred, (Professor Liebig,) says: "It has long since been found, by experience, that the growth of annual plants is rendered imperfect, and their crops of fruit or herbs less abundant, by cultivating them in successive years on the same soil, and that in spite of the loss of time, a greater quantity of grain is obtained when a field is allowed to lie uncultivated for a year. During this interval of rest, the soil in a great measure regains its original fertility. On the other hand it has been remarked, that a field which has become unfitted for a certain kind of plant, was not on that account unsuited for another, and upon this observation a system of agriculture has been gradually founded, the principal object of which is to obtain the greatest possible produce with the least expense of manure.

"Now it was deduced from all the foregoing facts, that plants require for their growth different constituents of soil, and it was very soon perceived that an alternation of the plants cultivated, maintained the fertility of a soil quite as well as leaving it at rest or fallow. It was evident, that all plants must give back to the soil in which they grow, different proportions of certain substances, which are capable of being used as food by a succeeding generation. But agriculture has hitherto never sought aid from chemical principles, based on the knowledge of those substances which plants extract from the soil on which they grow, and of those restored to the soil by means of manure. The discovery of such principles will be the task of a future generation, for what can be expected from the present, which recoils with seeming distrust and aversion from all the means of assistance offered it by chemistry, and which does not understand the art of making a rational application of chemical discoveries. A future generation, however, will derive incalculable advantage from these means of help."

By this improved mode of culture, through the instrumentality of a system of manuring, I believe, we may make one acre produce as much as two by the old denuded process, by which we take everything from the soil and return nothing to it. The consequences to our operatives from this mode of cultivation, by which we give to one acre the productive energies of two, are of inestimable consideration. First, one half of the horses and mules which we now use to go over an immense space of imperfectly cultivated soil, may be dispensed with, or used for the garden cultivation of a diminished number of acres. Secondly, to our slaves how greatly will the burthen be lightened, by tilling one half of the quantity of land, yet in the end having a harvest equally or perhaps even more abundant to gather? To say nothing of the increased facility of the harvest itself, by pulling two thousand pounds of seed cotton on one acre, instead of one.

At the Bend, I have this year planted in the check, twelve hundred acres of cotton—six hundred I have manured, the other six are planted in the first rise of the swamp, in a rich alluvium of untouched fertility requiring at present no manure. Two hundred acres of the former, on the second level of the swamp, are on a stiff clay flat. The cotton was planted in this field on the 1st of May. It did not receive a drop of rain until the 1st week in June. The consequence has been, that I have encountered incredible difficulty in obtaining a stand; some of the land was re-planted five times, and none less than three. It was not until the 10th of June, by unremitted efforts, I at last succeeded in setting the crop in this field. I advert to this miscarriage for the purpose of indicating its remedy, to wit: of giving a deep winter close furrow plowing, to all the clay lands you design for the check culture, and harrowing them early in the spring before you check off, after they have been rendered friable by the winter rains and frost, and another spring plowing. I believe I might have thrown up and abandoned these two hundred acres, and still that at the first level of the Bend, I will make more cotton, from present appearances, than my whole force can gather between the 15th of August and 15th of January, from manuring and adopting the check, and discarding the drill culture. On my first level, I have checked five feet by four, and on the second level, four feet square. I believe, however, five feet by three in the most fertile soils, and four by three in those of less richness, will be the right distance.

My corn on Cantey's fraction, which I think the richest piece of high river bottom I have seen this side of the Brazos and Colorado, I have planted in squares of three feet, and thinned to a single stalk. It is the best eared corn on my place, and will average, if no disaster occurs, nearly two ears to the stalk.

In noticing the check culture, I should be singularly unmindful of the claims of an individual who has most successfully directed the public attention to it, if I did not pay a willing tribute to the intelligence and ability with which he has illustrated the philosophy on which it rests. You will understand, gentlemen, that I can allude to no one but Dr. Cloud, of Macon county, who, by his careful analysis and induction of facts, has done much, I believe, to diminish the labor and augment the product of the cotton crop of the United States. That his theory rests on the true philosophy of the plant, I entertain as little doubt, as I do that its introduction will mark a new era in the culture of our beneficent staple. You will permit me to remark, that this system of manuring and planting in the check, take off half the tax on our lands, by allowing us to fallow half, or enables us to double our product in provisions and stock, if desirable. Indeed, a system of steady and efficient manuring, combined with an alternation of our crops, and of fallowing the most exhausted of our soils, constitute the best recipe for renovating an old country, and preventing a new one from growing old.

We ought to combine with this system of restoration and re-production in our soils, a most careful selection of the most approved species of stock. It seems yet to be a point undecided, whether the Holderness, Ayrshire, Herefordshire, Durham, or Devonshire breeds, are the best adapted to our climate, or whether any one of these stocks, engrafted on the common cattle of our country, would not be preferable to the unmixed foreign breed. Certainly, a cross of the Berkshire or Woburn with our common hog, is more thrifty than the full-blooded breed of either. The cattle of Alabama are so generally interior, that we propose premiums not only for the best specimens of horned cattle, but likewise for the best exhibition of any other domestic animal connected with the purposes of agriculture. Indeed, the economical husbandry of weaving our own negro cloth, of raising our own mules, cannot too soon claim our attention. On all these essential points of farming, I have made a beginning at the Bend, by the introduction of the best imported stocks; I have four different species of foreign cotton on which I am conducting a series of experiments; and a patch of sugar-cane, the syrup of which I mean to get by a new process of manufacture. The result of these experiments I desire to diffuse throughout our country, and indeed throughout the country as far as their utility can extend.

Fellow-citizens, we occupy a section of country worthy of the application of those great principles of agricultural renovation, to which I have referred. For strange as it may appear, some parts of Alabama already, young as she is, begin to put on the wrinkles and furrows of a premature old age, brought on her by the penurious barbarity of a soil-killing culture. The line of latitude, which cuts the very centre of the cotton cultivation of the new world, passes near the building in which we are now assembled. This beautiful plant bathes its blossoms in the beams of a sun, which no where shines with a more genial warmth, for its growth, development and maturity, than with us. Our soil is blessed with an Egyptian fecundity, diffused by that noble river which marches by our doors in silent majesty to the ocean—giving us a broad valley surpassed by none, if equalled by any, east of "the great Father of the Western waters." With all its affluence of soil, we must recollect, that our mother earth is as exacting as she is generous; she gives, but requires us to pay. If we fail in our tributes to her, she will fail in her donations to us. No good planter should rest quietly in his bed, except under the conviction that the spot which God has given him to till, is growing better, rather than becoming worse in his hands. This is a debt he owes to posterity, of much higher obligation than that which, by a Spanish aphorism, compels us to plant at least one tree before we die.

If we should be destined to see our great staple break down from over-production, or from any fanatic discriminations Great Britain may make in favor of what she calls, with abundant cant, free cotton, (as if she made one pound of cotton or sugar in India, but by a compulsory labor, in effect far more grievous than our own,) we still have left to us vast resources copious and untried.

I believe, without indulging in visionary projects in looking out for new staples, the experiments which have been made in Mississippi with hemp, justify the belief that we can equal the production of Kentucky in this great article of consumption; whilst the recent success of Professor Mapes, in extracting the finest quality of sugar from molasses, warrants likewise the belief, that a large profit may be realised at last by us, in the culture of the sugar cane, by the instrumentality of the evaporator which that gentleman has so successfully applied to the separation and chrystalization of the saccharine matter in molasses. We can make on our best lands, with the same facility that we can corn, five hundred gallons of the richest syrup to the acre, which would be found to hold not less than three pounds of sugar to the gallon in solution; far richer and much more easy of granulation than the molasses. I think I hazard nothing in saying, that if cotton should fall to five cents, that under the important discovery of this practical chemist, in five years all the alluvial lands on this river will be dedicated to the cultivation of the cane.

Madder is beginning likewise to attract the attention of the most intelligent of our agriculturists, as a staple adapted to our soil and cli-

mate, and susceptible of a moneyed return vastly transcending the culture of cotton.

We have everything to encourage us in our career. May the humble institution we have this day planted, tend to develope the resources of this section of our country, comparatively, even to ourselves so little known, by enlarging the sphere of our knowledge, exciting a spirit of generous emulation, and by its giving to one of the most useful arts God has given to man, something of that precision which belongs to it as a science which, from its certainty and truth, can hardly be called an experimental one.

From the American Agriculturist.

SOUTHERN PRODUCTS.

I have been a subscriber to your periodical from its commencement, and a careful reader of the various articles which have appeared in its pages, and with nothing have I been more pleased than with those communications which, from time to time, have been inserted, recommending to the attention of our farmers and planters new and valuable objects of cultivation. These communications are worthy of the most profound consideration of every cultivator of the soil. The articles on madder and indigo particularly commend themselves to attention. In a country so widely extended as ours, stretching as it does from the Gulf of the St. Lawrence *almost* to the tropics; embracing, too, every variety of climate, there can surely be found a climate and a soil adapted to almost every plant useful by its employment in the arts, or to the sustenance or luxury of man.

Every year we import largely the agricultural productions of other countries, which we might just as well, and, indeed, better raise at home. We purchase annually large quantities of olives and olive-oil from France and Italy, and figs from the Levant, and we buy many millions of pounds of tea from China. There are numerous other articles, too, of which the same remarks might be made with truth, but which do not at this time occur to my mind. The production of these articles at home is to be desired and encouraged by every well-wisher of his country; for I think it must be conceded by every intelligent man acquainted with the agricultural interest throughout the United States, that our farmers and planters have confined their attention to too few objects of cultivation. At the South, particularly, has this been the case. Cotton, sugar and rice, have been the staple articles of the Southern planters, and to the production of these have they directed their whole energies. The consequence of this has been an *over*-production; and when we consider the immense section adapted more particularly to the cultivation of cotton, it would seem that the danger of over-production in that article more especially, is yearly increasing. The same is true of the western country. The facility with which wheat, and every other species of grain adapted to the climate, is raised, is so great that there has been, still is, and under present circumstances, there must be, a production far exceeding the demand. Now the South and West are essentially agricultural regions, and for a long time must continue so; and to me it is very doubtful whether they ever become extensively manufacturing countries. At least, it will be conceded that a large manufacturing interest will not arise there, until the population becomes much more dense than it is at present. This state of things will surely increase the danger of over-production, which at present exists, and which is the true cause, in my opinion, of the low prices which we have had for a considerable time, of almost every article of agricultural produce; and these low prices must, I fear, continue, and indeed must fall still lower: for if we go on producing at the rate we have done, and are now doing, we shall not only be unable to consume our productions at home, but we shall also find it more than difficult to obtain any market abroad sufficient to absorb our surplus. To many of your readers these assertions of mine may seem not only bold but incredible, and I am fully aware that a general rise in produce has taken place during the past year. But I am satisfied of the truth and soberness of my ideas; for, as you well know, I have travelled extensively, and I have examined most of this country pretty thoroughly, and I think your own experience, gathered from long and distant travel, will bear me out in what I assert. The results of the crops throughout the country for the next five or six years will, I am confident, sustain my position.

I assume, then, that an over-production does at present exist, and will continue in an increasing ratio. Is there, then, any remedy? and if so, what is it? It seems to me that the true and sufficient remedy is to be found in extending our articles of cultivation, and extending them, too, until we raise in this country everything which our climate and our soil will permit us to raise at a reasonable profit; and it becomes the duty of every good citizen to lend his aid in accomplishing this very desirable object. But for this purpose individual effort is not sufficient. The people in their collective capacity should assist. The legislatures of the different States should do something, and do it carefully, energetically, and thoroughly. If the legislature of the nation could be induced to extend its powerful aid, it would be no more than a duty it owes to the people. But I fear that it is too much to expect from that degenerate body. At any rate, the State legislature might and could be induced to act, and their mode of action should be this. Take, for instance, the olive tree, the indigo, and tea-plants. I have no doubt that there are very extensive regions of the South exceedingly well adapted to their successful and profitable cultivation. The olive has been grown in Alabama; the indigo plant was at one time extensively cultivated in various districts of the South; and I am credibly informed that the tea-plant has been successfully cultivated to a small extent in two instances, one in North Carolina, and another on an island on the coast of Georgia. Nor is there any reason why either and all of these should not become great staples at the South; for the climate is well suited to their production, and if the cultivation should become extensive and profitable, it would not only relieve the South of the pressure of that great evil, an over-crop of cotton, by dividing the direction of the energies of the planter, but would also prove a source of increased and increasing wealth to that region.

Their legislatures, then, should act in this way. Intelligent and capable agents should be sent out to obtain information on the subject of the cultivation and preparation for market of these articles, (if such information cannot be obtained at home, and in the case of the tea-plant it cannot,) and on the return of these agents, the information they bring with them should be extensively circulated among the people; and the plants themselves should be widely distributed, and if necessary, experiments should be conducted at the public expense; and, above all, liberal bounties should be offered for the encouragement of the cultivation. In this way, the cultivation of indigo, olives, and tea, would in a few years obtain a firm foothold at the South, and her people would not only find themselves supplying our own country, but exporting to other countries. By such encouragement the silk culture has grown up and already taken firm root, and will, I may venture to predict, in a few years produce results very different from those anticipated shortly after

> "The days when we went *mulberrying*,
> A long time ago."

The present, moreover, is a most favorable time to take active measures for commencing the cultivation of the tea-plant especially, for our own country is just entering on better times, and we are about forming new and interesting relations with the Chinese. But these remarks do not apply merely to the cultivation of the olive tree, and the indigo and tea-plants, worthy as they are of the attention of the South. Numerous other articles of agricultural production might be pointed out, and will doubtless occur to yourself and your readers, to which my observation might be applied with equal truth. Let some or all of your numerous intelligent subscribers at the South investigate this subject with the attention it so well deserves, and strongly petition their legislatures to consider and act upon it; and the result, if the matter be persisted in, can hardly fail to be most important and beneficial to our Southern agricultural brethren.

I have not, by any means, exhausted this subject either in its bearing on the South, the West, or even our own more rugged and inclement North; and should you permit me again to occupy a space in your columns, I shall endeavor to point out some other and equally important considerations as connected with this most interesting topic.

In conclusion, I would fain hope that you and your numerous intelligent correspondents, will go on pointing out to us other new and valuable objects of cultivation, adapted to the different sections of our wide-spread but common country, and I trust that you will arouse the attention of the agricultural public in every way in your power, and by so doing you will oblige and interest more than one

NORTHERN FARMER.

From the Transactions of the N. Y. State Agricultural Society.

ON THE CULTIVATION OF DYERS' MADDER, AS AN ARTICLE OF AMERICAN AGRICULTURE.

(RUBIA TINCTORIA.)

BY M. B. BATEHAM, *one of the Editors of the New Genesee Farmer.*

The quantity of madder consumed annually in the United States, and imported from abroad, is perfectly astonishing to those who have given no attention to the subject. Unfortunately, our public records do not give very exact information on the subject; but Mr. Ellsworth, as the nearest approximation he could obtain, gives the amount as *five thousand tons!* Estimating this at the low average price of ten cents per lb., it makes the round sum of *one million of dollars* paid annually to foreign countries for an article that can be produced as good and as cheap at home—paid, too, by a people loaded down with indebtedness, and disgraced by the forfeiture of plighted obligation!

The cultivation of madder has heretofore been represented as a tedious and laborious operation, requiring much care and skill, as well as outlay of capital. The directions have been mainly gathered from foreign works, detailing the methods practiced by the plodding Dutch in Holland and Germany. These accounts have appeared so frightful to Americans, that none of them have dared to undertake the business; and Yankee enterprise and labor-saving ingenuity have never been exercised upon it.

It is true, the crop requires three or four years to arrive at maturity, and needs considerable labor and some knowledge; but the quantity of land it occupies, and the amount of labor it requires, is far less in proportion to the value of the crop than those of any other farm-crop that can be named.

These assertions are fully corroborated by the experience of an enterprising American farmer, Mr. Joseph Swift, of Erie county, Ohio, who has been engaged in the culture of madder for 5 years past. A detailed account of Mr. Swift's mode of culture and its results, was obtained at his residence last winter, by the writer of this essay, and published in the New Genesee Farmer for March, 1843.

From this account it will be seen, that after having informed himself on the subject, and becoming satisfied that the business was practicable and profitable, he at once planted nine acres—a quantity that would astonish Mynheer Van Hollander. This he allowed to grow four seasons, and the crop was harvested and sold in the fall of 1842. The following are some of the results of his experience. The product of his best land was at the rate of 2,000 lbs. per acre; and he is certain that, with his present knowledge, he can obtain 3,000 lbs. per acre—which is more than the best average crops of Holland or Germany. The *quality* was superior to the average of imported madder.

The labor required, including the whole time, with the digging, cleaning, threshing, &c., was from eighty to one hundred days' work per acre. The outlay for buildings, fixtures, &c., did not exceed, in all, fifty dollars.

The value of the crop was at the rate of fifteen cents per pound, at which price he sold most of it—notwithstanding the circumstance of its being unknown to purchasers, and all the prejudice that usually exists in such cases.

The result, then, in figures, fairly stated, stands thus, for an acre of good land properly managed:

By 2,000 lbs. of madder, at 15 cents per lb.,		$300 00
Contra—To 100 days' work, mostly boys, at 75 cents per day,	$75 00	
Use of land, 4 years, at $4 per year,	16 00	
Grinding, packing, &c.,	9 00	
		100 00
Leaving a nett profit per acre, of		$200 00

Mr. Swift was one of the earliest settlers of that section of the country, having resided nearly thirty years on the farm he now occupies, which consists of about 400 acres of choice land, mostly alluvial, in the valley of the Vermillion river, seven miles from Lake Erie. At my request, he furnished me with the following practical directions for the cultivation of madder, which he remarked must be understood as intended for those who wish to cultivate only a few acres, and cannot afford much outlay of capital. Those who wish to engage in the business on an extensive scale, would need to adopt a somewhat different practice.

Soil and Preparation.—The soil should be a deep, rich, sandy loam, free from weeds, roots, stones, &c., and containing a good portion of vegetable earth. Alluvial "bottom" land is the most suitable; but it must not be wet. If old upland is used, it should receive a heavy coating of vegetable earth, (from decayed wood and leaves.) The land should be plowed very deep in the fall; and early in spring apply about one hundred loads of well-rotted manure per acre, spread evenly, and plowed in deeply; then harrow till quite fine and free from lumps. Next, plow the land into beds four feet wide, leaving alleys between, three feet wide; then harrow the beds with a fine light harrow, or rake them by hand so as to leave them smooth and even with the alleys. They are then ready for planting.

Preparing Sets and Planting.—Madder-sets, or seed-roots, are best selected when the crop is dug in the fall. The horizontal uppermost roots (with eyes) are the kind to be used; these should be separated from the bottom root, and buried in sand, in a cellar or pit. If not done in the fall, the sets may be dug early in the spring, before they begin to sprout. They should be cut or broken into pieces, containing from two to five eyes each—i. e. three to four inches long. The time for planting is as early in spring as the ground can be got in good order, and severe frosts are over, which, in this climate, is usually about the middle of April. With the beds prepared as directed, stretch a line lengthwise the bed, and with the corner of a hoe make a drill two inches deep along each edge and down the middle, so as to give three rows to each bed, about two feet apart. Into these drills drop the sets, ten inches apart, covering them two inches deep. Eight or ten bushels of sets are requisite for an acre.

After Culture.—As soon as the madder plants can be seen, the ground should be carefully hoed, so as to destroy the weeds and not injure the plants; and the hoeing and weeding must be repeated as often as the weeds make their appearance. If any of the sets have failed to grow, the vacancies should be filled by taking up parts of the strongest roots and transplanting them; this is best done in June. As soon as the madder plants are ten or twelve inches high, the tops are to be bent down to the surface of the ground, and all except the tip end covered with earth shovelled from the middle of the alleys. Bend the shoots outward and inward, in every direction, put half a bushel of roots at a time and stir them about in the water, pulling the bunches apart so as to wash them clean; then, having a platform at hand, lay them on it to dry. To make the platform, take two or three common boards, so as to be about four feet in width, and nail cleets across the under side.) On these spread the roots about two inches thick for drying in the sun. Carry the platforms to a convenient place, not far from the house, and place them side by side in rows east and west, and with their ends north and south, leaving room to walk between the rows. Elevate the south ends of the platforms about eighteen inches, and the north ends about six inches from the ground, putting poles or sticks to support them: this will greatly facilitate drying. After the second or third day drying, the madder must be protected from the dews at night, and from rain, by placing the platforms one upon another to a convenient height, and covering the uppermost one with boards. Spread them out again in the morning, or as soon as danger is over. Five or six days of ordinary fine weather will dry the madder sufficiently, when it may be put away till it is convenient to kiln-dry and grind it.

Kiln-drying.—The size and mode of constructing the kiln may be varied to suit circumstances. The following is a very cheap plan, and sufficient to dry one ton of roots at a time. Place four strong posts in the ground, twelve feet apart one way, and eighteen the other; put girts across the bottom, middle and top; and nail boards perpendicularly on the outside as for a common barn. The boards must be well seasoned, and all cracks or holes should be plastered or otherwise stopped up. Make a shed-roof of common boards. In the inside, put upright standards about five feet apart, with cross-pieces, to support the scaffolding. The first cross-pieces to be four feet from the floor; the nex two feet higher, and so on to the top. On these cross-pieces, lay small poles about six feet long and two inches thick, four or five inches apart. On these scaffolds the madder is to be spread nine inches thick. A floor is laid at the bottom, to keep all dry and clean. When the kiln is filled, take six or eight kettles or hand-furnaces, and place them four or five feet apart on the floor, (first securing it from fire with bricks or stones,) and make fires in them with charcoal, being careful not to make any of the fires so large as to scorch the madder over them. A person must be in constant attendance to watch and replenish the fires. The heat will ascend through the whole, and in ten or twelve hours it will all be sufficiently dried, which is known by its becoming brittle like pipe-stems.

Breaking and Grinding.—Immediately after being dried, the madder must be taken to the barn and threshed with flails, or broken by machinery, (a mill might be constructed for this purpose,) so that it will feed in a common grist-mill. If it is not broken and ground immediately, it will gather dampness so as to prevent its grinding freely. Any common grist-mill can grind madder properly. When ground finely it is fit for use, and may be packed in barrels like flour for market.

Amount and value of Product, &c.—Mr. Swift measured off a part of his ground, and carefully weighed the product when dried, which he found to be over two thousand pounds per acre, notwithstanding the seasons were mostly very unfavorable. With his present knowledge of the business, he is confident that he can obtain at least three thousand pounds per acre, which is said to be more than is often obtained in Germany. The whole amount of labor he estimates at from eighty to one hundred days' work per acre. The value of the crop, at the usual wholesale price, (about fifteen cents per pound,) is from three to four thousand dollars. In foreign countries it is customary to make several qualities of the madder, which is done by sorting the roots; but as only one quality is required for the western market, Mr. Swift makes but one, and that is found to be superior to most of the imported, and finds a ready sale.

If any person desires instruction for making several qualities of madder, or further information respecting any other point, it may be obtained by addressing, post-paid, Joseph Swift, Birmingham, Erie county, Ohio.

From the Tennessee Agriculturist.

TO FARMERS' DAUGHTERS.

It has been sometime since I talked to the girls. This evening I will give them a few lines, letting them know I think of them yet. As usual, I am dwelling on the common, every day affairs of life, and feeling more and more the importance of young females being well acquainted with all the minutiæ thereof. The reason for my writing as I do at present, I will give you.

A few days since, I heard a gentleman, who wished a domestic, industrious, and contented wife, speaking of a pretty, interesting girl, praising her modest deportment and engaging manners; but at last, wound up with, "She does not know how to do any thing useful; she could not even make her own dresses; she would be of very little use in this world of hard work." Now, I had nearly the same opinion myself, though I would not tell him, you know; but I thought I would tell you, and let you profit by it, if you choose. He spoke also of some young ladies who studied mental and moral philosophy, chemistry, and other branches, and wanted to know what use it would finally be. He was certain, from his own observation, they did not have enough of philosophy to govern their tempers and general conduct; and as to chemistry, all their study of it had not given them a knowledge of bread-making, which he considered a very important item, his mother having been successful in that line of business, and he had been accustomed to the best sort of bread. He thought, if their studies were not of some practical utility, they might as well be let alone.

I was really amused, to hear views so much in opposition to the prevailing notions of the day; and, to tell the truth, I thought there was some good common sense in them, though I informed him the girls would laugh most heartily at such nonsensical stuff, in these days of improvement, when many consider it polite and sensible to be perfectly ignorant of common affairs. My advice was, that he should go away out in the country, and look for the daughter of some good farmer, who had taught his family that it is honorable to engage in all the useful employments in which the greater part of the duty of woman consists—one who could sit down happily at home, and study household good, without sighing for the excitement of fine dress, fashionable furniture, fashionable visits, and all those fashionable things that disturb the peace of young housekeepers, and render home a scene of misery and strife, instead of the gathering place of the heart's best affections.

If girls had any idea of what would promote their future happiness and interest, more of their precious time would be spent in the acquisition of useful and necessary knowledge, rather than frittering it away to gain a few (generally useless) accomplishments. The first is of great importance, in every situation of life; the latter are almost always given up, as soon as their possessor takes her station at the head of a family. I was led to consider what should be the character of a lady who has finished her education, or who at least has left school, and also of the training necessary to form that character.—Nothing preventing, I will tell you my cogitations at some future time, although some of you will think I am altogether too old-fashioned to be writing in these days of light and knowledge.

LUCY.

Agricultural Curiosity.—A friend has given to us a natural curiosity, as the product of a corn stalk. It is a main ear with thirty five lateral shoots, or small ears, most singular interwoven into each other, forming a handsome group, which might very properly be called a bouquet of ears. It was grown in the corn field of Mr. Diffenderffer, near Lancaster, Pa.

For the Southern Cultivator.

AUGUSTA, August 7th, 1844.

MR. EDITOR—I send you the copy of an extract, in the American Journal of the Medical Sciences, published in May, 1827.

M. Charles Garou de Buzareingues was a correspondent of the Institute of France. His experiments and observations were published originally in 1827, in Magendie's Journal of Physiology, Experimental, &c., vol. VII. This article was copied into the London Medical and Physical Journal, in February, 1828, whence it was taken by the Editor of the American Journal of the Medical Sciences.

There is no reason why it should not apply as well to other animals, as to those therein enumerated.

"A flock of sheep was divided into two equal portions, and a smaller or greater number of male or female lambs were to be produced, at the will of the proprietor, in each of these. The plan adopted in order to ensure this result, was to employ very young rams in that division of the flock from which it was designed to obtain females; and strong and vigorous rams, of four or five years of age, in that from which males were to be procured. The first division was also recommended to have a more abundant supply of food, and more repose than usual, during the period of impregnation. The following table will show the effect of the first experiment:

Age of the Mothers.	Males.	Females.
2 years,	14	26
3 years,	16	29
4 years,	5	21
5 years and upwards,	18	8
Total,	53	84
At another farm—		
2 years,	7	3
3 years,	15	14
4 years,	33	14
5 years,	25	24
Total,	80	55

"Another experiment is thus related:—A flock of 106 sheep was divided into two sections of forty-two each; one containing the strongest ewes, of four and five years of age—the second, consisting of the weakest, either less than four or more than five years old: the first section was intended to produce a greater number of females than the second; and, after having been marked and placed in a good pasturage, four rams, of about ten months old, were turned into them. The other section received two strong rams, each aged more than three years. The remainder of the flock, making up the number of 106, belonged to the shepherds; they are generally stronger and better nourished than the rest—and these, forming a third section, were placed under circumstances similar to the second.

"The result of the lambing was thus:—

	Males.	Females.
First section,	15	25
Second section,	26	14
Third section,	10	12

There were four double births; two of which, in the first section, produced 4 females. The two others, belonging to the second and third sections, produced 3 males and 1 female.

"It is to be remarked, that the rams proceeding from the section in which the young rams were employed, were in all respects as fine as those begotten by the older and stronger rams.

"In connection with this part of the subject, we find, in another part of the communication, a remark of some importance. In 1825, twenty ewes, which had not borne for two years, received the rams clandestinely in the beginning of the winter; they were almost all of them remarkably fat: they produced 16 females, and 4 males. Among the number of these ewes were 2 old ones, which had been put up to fatten in 1824, but could not be sold because they were not in sufficiently good condition; these gave 1 female, and 1 male.

"M. Garou next carries his inquiries into the productive power in the mare and cow. Respecting the first of these, he observes that, wishing to obtain more female than male colts, he fed his brood mares on fresh food; and he chose for propagation only such as had not been foaled or even nourished by the mother the preceding year; and he did not give them the stallion until they gave evident signs of being in heat. Five mares, so chosen, produced five female colts; and, by following the same method, out of thirteen colts foaled that year, eleven were females; and one of the two males was the product of an old mare. He remarks, that some mares of a remarkably vigorous appetite, always bring forth females; whilst those of delicate health as constantly produce males. The same remarks apply to the cow."

From the Western Cultivator.

PICKLES.

Accompanying I send you a few extracts, on the best methods of putting up pickles, as the time of year is approaching for this to be attended to.

"Musk-melons should be picked for mangoes when green and hard. They should be cut open after they have been in salt-water ten days, the inside scraped out clean, and filled with mustard seed, allspice, horse-radish, small onions, &c., and sewed together. Scalded vinegar should then be poured upon them.

Walnuts.—When these are so ripe that a pin will go into them easily, they are ready for pickling. They should be soaked twelve days in very cold and strong water, which has been boiled and skimmed. A quantity of vinegar, enough to cover them well, should be boiled with whole pepper, mustard seed, small onions, or garlic, cloves, ginger, and horse-radish; this should not be poured upon them until it is cold. They should lie in pickle a few months before they are eaten. To be kept closely covered, for the air softens them. The liquor is an excellent catsup to be eaten on fish.

Peppers.—Put peppers into strong salt and water, and let them remain there till they become yellow; then turn them green by keeping them in warm salt-water, shifting them every two days. Then drain them, and pour scalding vinegar over them. A bag of mustard-seed put in the jar is an improvement. If there is mother in the vinegar, scald and strain it.

Cucumbers.—Cucumbers should lie in weak brine three or four days after they are picked; then they should be put in a tin or wooden pail of clean water, and kept slightly warm in the kitchen corner for two or three days; then take as much vinegar as you think your pickle-jar will hold—scald it with pepper, allspice, mustard-seed, flag-root, horse-radish, &c., if you happen to have them: half of them will spice the pickles very well. Throw in a piece of alum as big as a walnut; this serves to harden the pickles. Skim the vinegar clean, and pour it scalding hot over the cucumbers. Brass vessels are not healthy for preparing any thing acid.

Red Cabbages need no other pickling than scalding, spiced vinegar poured over them, and suffered to remain eight or ten days before you eat them. Some think it improves them to keep them in salt and water twenty-four hours before they are pickled.

If you find your pickles soft and insipid, it is owing to the weakness of the vinegar. Throw away the vinegar, (or keep it to clean your brass kettles,) then cover your pickles with strong, scalding vinegar, into which a little allspice, ginger, horse-radish, and alum have been thrown. By no means omit a pretty large piece of alum. Pickles treated in this way, will keep for years, and be better and better every year.

Some people prefer pickled nasturtion-seed to capers. They should be kept several days after they are gathered, and then covered with boiling vinegar, and bottled when cold. They are not fit to be eaten for some months.

Martinoes are prepared in nearly the same way as other pickles. The salt and water in which they are put, two or three days previous to pickling, should be changed every day; because martinoes are very apt to become soft. No spice should be used but allspice, cloves and cinnamon. Scald the martinoes and spice in the vinegar, instead of pouring it over them."

POINTS OF A GOOD MILCH COW.

The following is from a report of the Guernsey Agricultural Society.

1. Purity of breed and qualities of the dam for yielding rich and yellow butter.
2. Small head, large and bright eyes, small muzzle, small ears, orange color within.
3. Straight back from the shoulders to the tail, and chest wide.
4. A fine and loose skin, with soft and short hair.
5. Sides well rounded, flank small between the side and haunch, tail fine.
6. Fore-legs straight and well proportioned, hind-legs broad above the knee, fine and clean below; hoofs small; legs should not cross in walking.
7. Udder large, and the teats large, and springing from the four corners of the udder; milk-vein large and well-defined.

From the Albany Cultivator.

AMUSEMENTS FOR FARMERS' BOYS.

Being lately at the residence of one of our most intelligent farmers, our attention was attracted to the door of a small room in an outbuilding, which was labelled "—— office." On inquiry, we learned that this was a room given up to the boys. Entering, we found it fitted up with miniature implements of husbandry, seeds of different kinds, a few plants, and branches of ever-green, the walls decorated with portraits of celebrated horses, cattle, sheep, swine and poultry; while on some shelves, were some geological specimens, and several juvenile books of a character calculated to inspire a taste for rural life, and at the same time to teach correct modes of husbandry, horticulture, &c., the whole arranged in agreeable order. It struck us as an excellent plan, and we would suggest its general adoption. It furnishes the means of both amusement and instruction.

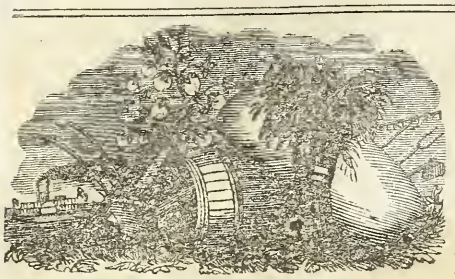
How infinitely better it is to allow boys an opportunity of spending a part of their time in thus cultivating a taste for the investigation of those subjects by which their knowledge of nature and the world around them is increased, than in mixing with rude company and becoming contaminated with their vices.

RURAL EMBELLISHMENTS.

I have said and written a great deal to my countrymen about the cultivation of flowers, ornamental gardening, and rural embellishments; and I would read them a homily on the subject every day of every remaining year of my life, if it would induce them to make this matter one of particular attention and care. When a man asks me what is the use of shrubs and flowers, my first impulse always is to look under his hat and see the length of his ears. Heartily do I pity the man who can see no good in life but in pecuniary gain, or in the mere animal indulgences of eating and drinking.—*Colman's European Agriculture.*

TALL CORN.—A down-easter recently told a citizen of the "Lone Star Republic," that nothing could beat the corn in Connecticut. The Texan replied that he knew nothing of the crops in that section, but in his country the cornstalks bore seven or eight large ears, and a gourd on top with several quarts of shelled corn in it! The Yankee took his hat and marvelled.—*Selected.*

☞The Southern Farmer and Gardener says that, by an experiment recently made, it was ascertained that clover and timothy seed would cease to germinate at the depth of two and a half inches.



WEDNESDAY, AUGUST 21, 1844.

☞"A Burke Overseer" has exhibited too much feeling in his reply to "A Burke Planter," to gain admission into our columns. Our object in publishing the "Cultivator," is to elicit truth and diffuse light upon all and every subject connected with agriculture; and, as these are not likely to be accomplished by a heated or excited discussion, we will not permit such in our columns. While, therefore, we shall take great pleasure, at all times, in giving place to temperate discussion upon all subjects, and on none more cordially than that of overseers, we hope our readers will approve our determination to exclude whatever is calculated to engender ill feeling.

☞It is estimated, by the Vicksburg Constitutionalist, that the destruction of property by the recent floods will amount to over *twenty millions of dollars*. The loss of cotton is said to be at least 450,000 bales, or nearly one-fifth of the whole crop of the United States.

☞A late letter from England to a house in Boston, states that vessels are in great demand —not less than 700 to 800 being engaged in the Guano trade alone.

☞As many planters in our own State bestow an undue share of their attention upon their cotton fields, to the neglect of corn and other provisions, and thus, as we think, pursue an injudicious system of husbandry, we commend to the perusal of such the following extract from Ruffin's Agricultural Survey of South Carolina.

"It is a common opinion, that the cultivation of rice and cotton is much more profitable than that of corn and other provisions, and that those planters having good lands for the former, can better afford to raise them, and buy provisions in part, or corn, sometimes, entirely. This opinion seems to me erroneous, almost without exception. It seems next to impossible, that there can exist, anywhere, a truly thriving agricultural class, which, as a regular system, buys, instead of raising, the necessary and most important articles of food. Such a system, pursued by the proprietors of rich rice and cotton lands, may indeed present large incomes of money for crops sold; and it may minister to encourage great luxury and expenditure. But it will be apt also to induce a pinching measure of the plain and solid comforts, and even in respect to necessary wants, and a scant provision of proper supplies of aliment to man and beast, and also to the land. A thorough reform on this head, to be produced by the sufficient diminution of each individual's rice and cotton culture, and substitution of extended corn, and other provision culture, and grass and stock raising in general, is essential to the permanent, solid, and agricultural prosperity of the State."

☞It is easier to bring up a dozen children right, than to reform one grown scamp. Many have learned this too late to profit by it.

☞Hungarian Yeast, says an exchange paper, will keep for a twelvemonth. During the summer season, they boil a certain quantity of wheaten bran and hops in water—let it ferment. When this has taken place, throw in sufficient of bran to form it into a thick paste, which they make into balls, and dry by a slow heat. When wanted for use they are broken, and boiling water is poured upon them.

THE GLANDERS.

Mr. J. B. Cook, in the Albany Cultivator, says: "Whilst writing, I will mention a fact for your veterinary department. More than thirty years since, the glanders of the most virulent kind, was amongst the horses of the neighborhood in which my father lived. Great numbers died off. His horse was affected, and under the belief that he also would die, my father commenced an experiment on him with a strong decoction of tobacco juice given internally. In a short time the horse broke out all over his body in sores. These cured up in a month or so, and the horse was sound, soon fatted, and was, as long as I knew him afterwards, a sound and healthy animal. This was the only horse in all the neighborhood that recovered. Some farmers in this vicinity, noted for fine sleek horses, occasionally give Scotch snuff to them."

A NEW PUDDING.

We yield to no man in our admiration of Indian Corn, and the various culinary purposes to which it is applied. But here is one of a nature rather novel to us, but we should not fear to endorse it upon the authority of the recommendation of Prentice, of the Louisville Journal, whence we clip it:

One of the very nicest things ever brought to the table, in the pudding line, is the green corn pudding, prepared according to the following recipe. Let every wife, who would like to surprise her husband by a rare delicacy, try it.

Take of green corn twelve ears and grate it. To this add a quart of sweet milk, a quarter of a pound of fresh butter, four eggs well beaten, pepper and salt, as much as is sufficient; stir all well together, and bake four hours in a buttered dish. Some add to the other ingredients a quarter of a pound of sugar and eat the pudding with sauce. It is good cold or warm, with meat or sauce; but epicures of the most exquisite taste declare for it, we believe, hot, and with the first service.

It is said that there are some folks who write, talk, and think so much on virtue, that they have no time to *practice* it.

To raise young turkeys, wet their food with sour milk, and let them have free access to a vessel of sour milk for drink. Use corn meal for their food. So says the Prairie Farmer.

Comparative Nutriment of Food.—110 lbs. of wheat contain 85 lbs. of nutritious matter; of rice, 90 lbs.; of rye, 80 lbs.; of barley, 83 lbs.; of beans, 89 to 92 lbs.; of peas, 93 lbs.; of meat, average, 35 lbs.; of potatoes, 25 lbs.; of beets, 14 lbs.; of carrots, 14 lbs.; of greens and turneps, 8 lbs.; of bread, 80 lbs. Indian corn is about next to wheat. A pound of bread contains more than double the nutriment of a pound of meat; and seven pounds of potatoes are equal to five of meat.

Sow millet one bushel to the acre; cut it as the seed begins to turn yellow; cure it as other hay. Horses or cattle prefer it to clover or timothy. It matures in two months. Sow from April to August.

MANURES.

The following communication upon this important and very interesting subject, from a highly esteemed correspondent, has reached us just on the eve of going to press, and we give place to it in preference to any speculations of our own.

For the Southern Cultivator.

Mr. Editor—In the early settlement of the lands in Georgia, the soil was sufficiently fertile for the farmer to make as much produce as his wants required, or he was willing to harvest. But, by continued cropping, lands became exhausted, because each crop takes from the soil some of the elements that enter into the composition of all plants. Such is the case with many of the lands in this State, and most of them are approximating a state of barrenness. It then becomes the interest and the duty of every farmer, to look out for a remedy to stop the wearing out of his lands, and the best method of restoring them to their original fertility. Each and every part of the State should study out its own resources, and apply them to the improvement of the lands. The Northwestern part of the State has lime; some of the Southern counties have lime and marl: while in the middle counties, we shall have to rely upon such manures only as we can make on our farms. Colonus, in his excellent remarks on manures, has nearly occupied the whole subject, when he directs manure to be obtained "from everywhere." Every one will have to make and gather manure on his own farm, the best way he is able—and those who commence first, will acquire the most skill and knowledge in making and applying manures.

Those manures that most naturally present themselves to the notice of the farmer, are green manures, or vegetable matter in the green state. The plowing under green crops sowed for the purpose, or green weeds or grass, that grow spontaneously upon the land, has been practised in some countries with great advantage. Professor Johnston says, "the plowing-in of green vegetables on the spot where they have grown, may be followed as a method of manuring and enriching all land, where other manures are less abundant. Growing plants bring up from beneath, as far as their roots extend, those substances which are useful to vegetation, and retain them in the leaves and stems. By plowing in the whole plant, we restore to the surface what had sunk to a greater or less depth, and thus make it more fertile than before the green crop was sown. This manuring is performed with the least loss by the use of vegetables in the green state. By allowing them to decay in the open air, there is a loss of organic and inorganic matter: if they be converted into fermented (farm-yard) manure, there is also a large loss—and the same is the case, if they are employed in feeding stock, with a view to their conversion into manure. In no other form can the same crop convey to the soil an equal amount of enriching matter, as in that of green leaves and stems. Where the first object, therefore, in the farmer's practice is so to use his crops as to enrich his land, he will soonest effect it by plowing them in the green state."

Thus we have found one source of enriching our lands within the reach of every farmer. Those green vegetable substances, best suited for manure, are such as derive most of their sustenance from the atmosphere; while in the growing state, such as corn-field peas, &c.; clover, wheat, rye, barley, oats, and Indian corn, are all used for soiling—grass and weeds also afford excellent manure.

Green vegetable substances should be plowed under before they begin to form seed. Dry vegetable substances are usually placed in the manure yard—and after they are partially trodden to pieces, are taken up, spread broad-cast on the fields, and plowed under. Others take up the manure, place it in pens, and suffer it to ferment and decompose, and form what is called short manure—which is applied in the hill or drill. There is less loss in the first method. There is one kind of valuable manure which is almost entirely lost to Southern farmers. Professor Johnston says, that the recent urine of one cow, in one year, contains 900 pounds of solid matter, yielding 226 pounds of ammonia; which, in Flanders, is valued at $10 a year for manure, which is the value of an ordinary cow in this State. Though there is no doubt, the solid and liquid manure of cattle will be varied by the quantity and quality of their food. In order to save such manures, stables and cow-houses must be constructed, with drains and reservoirs to receive the liquid manures.

The above is mentioned to show the value some place upon manures.

In preparing cotton-seed for manure, there is no doubt but a large portion of the manure is lost by evaporation. No person can pass a pen or pile of cotton-seed, while it is rotting, without smelling the gas that escapes from the seed. By covering the seed with soil ten or twelve inches deep, the dirt will absorb the gas, and become good manure itself.

I have, Mr. Editor, mentioned some of the manures which are within the reach of all Southern farmers—and it is hoped they will no longer delay to make and use them on their lands. PLOWMAN.

NEW COTTON.—In New Orleans on the 10th instant, 54 bales of the new crop had been received. The first load of new Cotton seen at Columbia, S. C., was sold there on Saturday last. It brought 7¾ cents per pound.

NOVEL HOT-BED.---It is stated in the report of the Midland Mining Commission, that near Dudley, in Staffordshire, early potatoes are raised for the London market in ground heated by the steam and gases emitted from an old colliery which has been on fire for many years. This is a much more direct and economical application of internal heat than that proposed by our Parisian neighbors, who are at present laboring to procure naturally heated water from a depth of 3000 feet wherewith to warm the greenhouses and menageries of the Garden of Plants---presuming that water from that depth will be raised to 100 or 104 degrees of Farenheit, by the central or internal heat of the earth.---*Chambers' Jour.*

A SALUTARY RESTRICTION.---The Government of the principality of Waldek, in Germany, have given public notice that no license to marry will hereafter be granted to any individual who is addicted to drunkenness; or, if having been so, he must exhibit full proofs that he is no longer a slave to that vice. The same Government have also directed that in every report made by the ecclesiastical, municipal, and police authorities, upon petitions for license to marry, the report shall distinctly state whether either of the parties desirous of entering into matrimonial connexion is addicted to intemperance or otherwise.

From the Rochester Democrat.

AWAY TO THE WOODLAND.

BY J. D. REID.

Away to the woodland, away to the stream,
Where the merry stars on its bosom beam!
How swift from the city's dull smoke we fly,
That shadows the glance of this laughing eye!
My head aching,
My bones are sore,
And joy awaking,
Can wait no more.
So off to the woodland, away to the stream,
Where the merry stars on the water beam!

Oh! who would live always from the breeze,
That flesh o'er the fountain trips over the trees?
Where the green grass bends to the merry lamb,
As it skips and bleats by its woolly dam?
Whew! snap the fetter!
Come, pony, go,
Where oats are better,
And parsnips grow!
Away to the woodland, and down by the stream,
Where the merry stars on the waters beam!

We will strip the cress from the babbling brook,
We'll sipple the cream in its stealthy nook!
And the richest herbs and the purest air,
Shall soon be our morning and nightly fare!
Quicker and fleeter,
Come, pony, haste,
Where hay is sweeter,
To pony's taste!
Down by the woodland, away by the stream,
Where the merry stars on its bosom beam!

I hear the plow o'er the mellow ground,
And the distant cowbell's clinking sound;
And the buzzing wheel, and the echoing stroke
Of the bushman's axe on the "brave old oak."
On his proud domain
The rooster crows,
As he picks the grain
Where the plowboy goes.
Near a sweet little cottage, down by the stream,
Where the merry stars on its bosom beam!

I could not live alway away from the churn,
Where the oceans of cream to buttermilk turn;
Down in the city, its dust and its din,
Where men are so noisy and milk is so thin!
Fleeter, oh! fleeter,
Come, pony, go,
Where birds sing sweeter,
And pumpkins grow!
Away by the woodland, and down by the stream,
Where the merry stars on its bosom beam!

Grey Squirrels.—A correspondent of the Philadelphia North American, writing from the borders of Lake Champlain, confirms a statement made by Dr. Morse in his well-known geography, and which has by some been regarded as fabulous. He says:

"A word on the instinct of the squirrels here. When they wish to move from one island to the other, they watch the wind till it blows in the right direction, and then you will see them in dozens coming to the beach, each with a large piece of bark in his mouth, which he launches, then jumping on board turns up his tail for a sail, and over he goes to the port of his destination. I might have shot them while making sail, but it looked to me as something almost wicked."

Singular Incident.—During the run of the ship Phœnix, from the Island of St. Helena to this place, an African locust flew on board, which was caught and preserved. The distance of the vessel at the time, being one thousand and thirty miles from the continent of Africa, and a still greater distance from that of South America Query—What did the little navigator subsist on during the voyage?—*Sag Harbor Corrector.*

CONTENTS OF THIS NUMBER.

Selections, Extracts, &c.

Extracts from Ruffin's Survey of S. Carolina...129-130
Southern Agriculture.....130-132
Southern Products.....132
On the Cultivation of Dyers' Madder, as an article of American Agriculture.....132-133
To Farmers' Daughters.....133
Agricultural Curiosity.....133
Experiments with Sheep to Control the Sex of Lambs.....134
Pickles.....134
Points of a Good Milch Cow.....134
Amusements for Farmers' Boys.....134
Rural Embellishments.....134
Tall Corn.....134
EDITORIALS, ETC.....135
The Glanders.....135
A New Pudding.....135
Manures.....135-136
Away to the Woodland.....136

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From the N. E. Farmer.

THRIFTY AND UNTHRIFTY FARMING.

FRIEND BRECK—I recently made an excursion of some distance in the country, and tarried for a short time in a farming community, where the first eighteen or twenty years of my early days were spent. Many years have elapsed since, and other pursuits have engrossed my time and attention. Yet, often my mind reverts to the scenes of youth, and memory rolls back the recollections of other days, when, in common with all the rural community in which I resided, I felt all the joyous hope of seed-time, entered with zeal into all the labors and excitement of haymaking and harvest, and shared in all the frolic and glee of husking parties; and in all the thoughtlessness and buoyancy of youth, looked forward for thanksgiving, as the very best of all the days in the year.

In visiting the place, after an absence of twenty or more years, I found many striking changes had taken place: many an honest, brawny-limbed farmer, then lord of his broad acres, now occupies but his six feet by two, in the "auld kirk yard;" and others that were then in the vigor of manhood, and had been spared, were bowed down with age, and their thick locks had been plucked by the fingers of time, or silvered o'er by the frosts of 70 or 80 winters. Many of my schoolmates who were then wild and reckless youths, with whom I had an hundred times tried the "tug of war" at *long hold* and *side hug*, were now staid and steady farmers—heads of families engaged in all the business scenes of life. And of the bright-eyed, flaxen-haired lasses, many were transformed to sober and careful housewives and mothers—and others were quietly sleeping the slumber that knows no awakening, most of whom had been carried off in all the bloom of youth and early womanhood, by that scourge of New England—consumption.

But as the whole country was covered with snow, I could not make much of an agricultural survey; but upon inquiry, I learned that many farms had, from bad management and culture, very much deteriorated, and greatly lessened in value; others had held on the even tenor of their way, and wintered about the same number of cattle they did formerly, and some few in the hands of enterprising, intelligent farmers, were advancing with a sure and steady pace, that would yearly add to their value, and to the wealth of their owners.

There had been several causes in operation to exhaust the first named class of farms—such as plowing the lands in the autumn, where much of the finer portion of the soil was blown off by the winds, and washed by the rains and melting snows, and suffering their cattle to roam over their mowing fields, both fall and spring, with a reckless waste of their manure.

In conversation with one of those farmers, (a Mr. G.,) whose farm had run backwards, I suggested to him the idea of collecting the leaves and decaying vegetable matter from a piece of woodland near by. "Why," says he, "I haint much opinion of this vegetable matter—'tis sour stuff: only give me dung enough from the hovel windows, and I can raise as good crops as Mr. I. does, with all his swamp muck, lime, compost and book-farming." I inquired if he took an agricultural paper. "No," said he—"I did take one several years ago, and that had so much to tell about a new kind of potato, that they sold for twenty-five cents a pound, and after all, it warnt no better than the long reds; and about tree corn and mulberry trees; and a good many farmers got bit, by believing their great stories, that I got sick of, and stopped it, and would not now take the gift of one."

I afterwards called upon Mr. I., the "book-farmer," as Mr. G. sneeringly called him, and found him a middle-aged, intelligent farmer, who was quietly improving his farm by every means within his reach. I was so much interested in his management, that I thought I would attempt to communicate an account of it to the public, through the columns of your useful journal, with the hope that other farmers might be benefitted by his example.

Upon looking into his barn, I found his hovel floors were water-tight, and sloping toward the back side. In the rear of the cattle, was a kind of trough of the width of 12 or 15 inches, made by sinking one of the floor-planks two inches; this was also water-tight: the droppings from the cattle mostly fell into the trough, and by giving the cattle a good bedding of litter every night, they were kept comfortable, and nearly as clean as when at pasture. He had the past winter used several loads of saw dust from a shingle mill, and leather shavings from the currier's, for the purpose of bedding, and soaking up the urine. The hovels were daily cleared out by wheeling the manure and litter into the centre of the yard, (which is dishing,) and piling it up in a snug heap. His barn is so situated he cannot dig a cellar under it, but intends the coming season to build a shed for the purpose of keeping his manure under cover for the future. The floors of his horse-stable are tight; every day it is cleared, and the manure and litter is spread under a shed, and by being trodden by his stock, it does not heat and fire-fang, as is too often the case. Most of his winter manure will be mixed with swamp mud, to compost through the summer. I inquired respecting a heap near his barn: he said there were two cart-loads of lime-mortar, that he bought for a trifle, of a man who had taken down a large house; it was mixed with about four loads of brake-root turf, about 18 months ago; it had been left this length of time for the purpose of having the plaster come to pieces, and rotting the turf. Last fall it was shoveiled over, and two lime casks of fleshings, procured at the tanner's, mixed with it. He thought while this animal matter was decomposing there would be a large amount of nitrogen generated, and give him a large amount of nitrate of lime by spring, when it would be again shovelled over, and 35 bushels of good ashes mixed, and then applied to an acre and a half of ground, upon which he should sow wheat: I think he said the compost was to be put on after the ground was plowed, and to be harrowed in with the wheat. The ashes he had purchased at ten cents per bushel

He had a cartload of the waste wool, or flyings, from the wool carder's; this was to be boiled for a short time in lye, to cleanse the oil and grease, and to render the wool more decomposable. By way of experiment, a part of it would be used to manure some of his corn and potatoes in the hill, the rest would be mixed in the compost heap, to remain a year or so. He also had a large quantity of old woollen rags, that he bought of a store keeper for a trifle—having, he said, read in some book, that 100 lbs. of woollen rags contained as much nitrogen as 3000 lbs. of cow manure. Some of these rags were to be chopped up and steeped in urine for a few days, then to be partially dried and sprinkled with gypsum, and used as manure in the corn and potato hills; the other part would, like the waste wool, be composted. He had a number of casks of fleshings that were obtained at the tanners, which would be mixed with vegetable mould as soon as the snow was off, and he could obtain it; he has also taken the hair, lime, and piths of horns from the tan-yard; the bones are broken up by the hammer and mixed with manure and plowed in; they will slowly decompose, and supply phosphate of lime to his land; he had about two barrels of the settlings of salts from the pearlash factory—similar, he thought, to the material known as glass factory manure: an account of its use and value is given in Mr. Colman's Fourth Report, pages 344--5, by a Mr. Jarvis. There were a few inches of lye upon the top of the salts in the barrels, so strong as to float an egg with nearly one half its surface above the lye. This, he assured me, according to Mr. Jarvis's statement, would convert 10 or 15 loads of loam or muck into a compost equal to the same amount of good stable manure. All these materials, sawdust, wool, fleshings, hair, lime, piths of horns, and salts from the potash, he had for removing, as they were considered a nuisance, and of no value by the manufacturers or owners. The droppings of the fowls are occasionally scraped from the boards, over which the hens roosted, and put in old casks; in the spring it will be moistened with urine and ground to pieces with a hoe, and mixed with plaster of Paris, to be applied to grass land, or put about the corn an potato hills, at the first or second hoeing; he styles it "Yankee guano." He has a strong tight box under his back house, in which is frequently thrown gypsum, or charcoal dust obtained from the coal-pen of the village blacksmith: it absorbs the smell, and once in a week or two, the contents of the box are mixed with dry peat or sawdust, or some other material, to absorb the liquid part, and put into old tight barrels. This is home-manufactured *poudrette*. His hog yard is of good size, has been dug to the depth of 18 inches, and a good plank floor over the whole, which makes it easy shovelling out the manure. The suds from the wash are conveyed to it by a spout, which, with the manure of his hogs mixed with the loam, muck, and other materials, make many loads of vegetable manure. He has tried many experiments that he has seen recommended in the agricultural books and papers that he has read; he says, after he became one and twenty, he did not feel obliged in all things to follow in the "footsteps of his worthy predecessor," his father, and sometimes pursued a new track, and went upon his own hook. He intends getting a small quantity of guano and ground bones the coming spring, for the purpose of testing them by the side of other manures. Several of the kinds he has not yet tried, but from his remarks, I feel satisfied he will find them all invaluable helps for increasing his crops, and from the nature of some of them, valuable and permanent improvers of his soils.

Salem, April, 1844.

☞Purple cabbages, the heads not large, but fine and firm, are best for pickling.

From the New England Farmer.

ROOT CULTURE—ROTATION OF CROPS—DEEP PLOWING.

We have as yet seen no writer disputing the necessity or utility of *manuring land* to keep up or increase its fertility; but it would not greatly surprise us if some one, to show his superior sagacity, *did* shortly attack this (generally considered) *settled* point in agriculture.

In one agricultural paper, we find some writer attacking *root culture*; in another, we see the doctrine of *rotation* assailed; and in another, some one, bolder than the rest, attempts to show that *deep plowing* is a "humbug"—or not what it has "been cracked up to be"—in fact, that it is detrimental to the farmer's interest.

Upon the first of these topics—root culture—we are aware some difference of opinion exists among farmers—and *good* farmers, too. We confess ourself on the side of the roots. We have cultivated them to a considerable extent—carrots and ruta baga especially—and our experience in their use has highly commended them to our favor. There is this advantage in roots, (aside from others,) which we consider of much importance: they enable us to get rid of a good deal of coarse fodder, by being mixed with it, while upon such feed the stock thrive as well as if kept on the best hay. We cannot join with those who think root culture unprofitable, though we have a high respect for the judgment of some who hold this opinion.

The expediency of a *rotation of crops* is also called in question, and by some seemingly ridiculed. In the article headed "Change of Crops," copied into last week's Farmer, a case was cited in disproof of the necessity of rotation, where rye had grown well on the same land 27 successive years. Now, the mere fact that a particular soil gives a good crop of one kind for many successive years, is no very conclusive proof to *our* mind, that the *principle* of rotation is not sound and well founded. We were once shown a field bordering on the sea-shore, which we were informed had continued to give excellent crops of grass yearly for 26 years, without the application of any dressing. Such instances are rare, and can only be regarded in the light of "exceptions to a general rule." Why, it is to this principle of rotation, judiciously carried out, that many of the English farmers mainly ascribe the great improvement which they have effected in their husbandry; and in our own country, where the proper "course" has been adopted the rotation system has been found not only an improvement upon old customs, but one of the most important aids which the increased wisdom of the world has given to agriculture.

Rotation of crops is one of the most prominent features of the improved system of husbandry. Under the old method of farming, the land was cultivated without regard to the *nature* of the crops grown, and when it was thought that it required rest, the losing practice of *fallowing* was resorted to. But little importance was attached to the fact of one crop being more *exhausting* than another, or that it was good policy to succeed a crop which *left nothing* in the ground, by one that left its *roots*, to compensate in a measure for what it had taken from the soil. The rotation system was founded upon the utility of a change of crops for the benefit of the soil, and we hazard little when we say that it has been found as profitable in practice as it is philosophical in theory. In these remarks, we have no reference to the "excretory theory" of De Candolle, which, we think, is so far from being proved, that it is yet debateable.

Among other modern improvements (or so considered) now being attacked by certain writers, is that of *deep plowing*. This is one of the very last features of improved husbandry that we should have expected to see arraigned for faults. We had been convinced, from our own experience, and the concurrent testimony of observing farmers, that deep plowing was all that it ever had been recommended to be by its most zealous advocates an invaluable help to the farmer in improving the fertility of his soil, (of course increasing its products,) and saving expense for manure, or enabling him to apply it where more needed. We had convinced ourself—and the conviction is as firm as ever—that deep plowing and manure were the farmer's sheet anchor—his main reliances. We refer particularly to our Northern and Eastern farmers; —to those who till the prairie soil of the West, we have no reference.

To us it seems not a little surprising that this practice of deep plowing, which both here and on the other side of the Atlantic, has been considered, universally, so far as we are aware, as of the greatest advantage to the farmer, should now be decried by a writer, who, gifted beyond all others in the faculty of discernment, has discovered that it works the farmer no good.

However advantageous to our farmers may be the culture of roots or rotation of crops, we deem either of these of less importance than the improvement of *deep plowing*—and we are quite confident that he or they who shall attempt to write it into disrepute, will find that it has secured too fast a hold on the favor of our enlightened husbandmen, ever to be abandoned for the old "shallow" system, which (with all due reverence for the departed,) was indeed shallow in more respects than one.

From the Albany Cultivator.

CLEAN CULTURE.

It is a fact that ground which is kept from vegetation of any kind, will not dry up so much as that on which a crop is grown. There are many who doubt this, but if they would make a proper examination, their doubts will be removed. Make an experiment--take a piece of ground in the garden, and hoe it over every day, or often enough to keep all kinds of vegetation from starting. Sow another piece adjoining, with grass, or some kind of grain. After a drouth of two or three weeks, examine both pieces by digging into them with a spade or shovel. The earth of the grass or grain plat, will be found dry like ashes, to the depth perhaps of a foot or more. The other plat will be dried in only two or three inches--below that it will be found quite moist. Examine the ground in an orchard in a dry time, and if it is not naturally a wet piece of ground, it will be found dry to a great depth. If there is a tree in your corn field, see if the ground is not much dryer near it than on similar ground away from the reach of its roots. The fact is, the roots of vegetation bring up the moisture from a greater depth below the surface, than it could be done by simple evaporation. This may be known by noticing how much more moisture is required to support a crop of corn when the stalks are nearly full grown, than in its earliest stages.

Now, from all this we deduce an argument in favor of *clean culture*—that is, a culture which permits no useless vegetation to grow among cultivated crops; the advantage of which would be to give the crop the whole benefit of the moisture and other nutriment of the soil, instead of giving a portion to the worthless weeds.

In a dry time, we frequently hear farmers say, "it will not do to work my corn or potatoes, they need all the grass and weeds to keep the ground from drying up." Now this, as we have shown, is all a mistake; the grass and weeds make the ground dry faster and deeper. But it is alleged that corn has been injured by plowing or working it when the weather was very dry. We admit that this effect may have followed under particular circumstances: that is to say, if corn gets too large before it is worked, injury may be done. The reason is, that the roots have become extended, and the plow cuts off so large a portion of them, that the remainder cannot supply the stalk, and it soon withers. This is the way the "fired" corn, sometimes spoken of at the south and west, is generally produced. But it is only when the roots of corn have become widely extended, and are torn and mutilated in the operation of working it, that any such consequence follows. If the crop is worked, as it ought to be while it is small, no fears of injury need be entertained.

From the Southern Planter.

PHILOSOPHY OF WHEAT CULTURE.

Dr. Lee, who is one of the most devoted friends of agriculture in America, read a very able paper before a meeting at the State House in Albany, last winter, upon the cultivation of wheat. He calls to mind that from the analysis of Sprengel, the mineral proportion of the plant amounts only to three per cent. of the whole, and that wood ashes presents very nearly the same mineral constituents and in the same proportions; whence he infers, that soils the most wanting in these constituents, may be supplied with a sufficient quantity for all wheat bearing purposes by a small dressing of ashes. He goes on to say:

"Being but slowly decomposed by the vital action of plants, ashes are an enduring fertilizer when compared with stable manure. Mixed with quick lime, their good effects are more speedily obtained. Lime will render alumini either in the soil or in leached ashes, soluble in water, so that it can enter the minute pores of roots. Clay in the soil is always combined with a large portion of silica; and before it has been exhausted by continual cropping, it holds in combination considerable potash and soda.—Lime, by combining with alumini, the basis of clay, liberates these alkalies and silica, which, uniting chemically, form soluble silicates of potash and soda. These also enter into the circulating nourishment of plants, and are decomposed in the stems of grasses and cereals. The silica goes to make vegetable bone, to keep the plant upright; while the potash and soda go back to the earth, to dissolve, as before, another portion of sand, to be also absorbed, and transformed into bone. It is in this way that a few ashes, applied to a sandy soil, will enable grass and grain to take up the eighty-one per cent. of flint found in their ashes. Lime will do the same thing on clay soils, for the simple reason that they generally do not lack potash, soda and magnesia.

"The quantity of lime and ashes to be applied to an acre, will depend entirely on their cost at the place where they are to be used. A few bushels will be of essential service; but a larger dose will be better.

"I come now to speak of the organic elements of the wheat plant, which, as I have already intimated, form ninety-six or ninety-seven per cent. of its substance. Water and its constituents, oxygen and hydrogen, carbon and nitrogen, are the four elementary ingredients of all cultivated plants, beside their minerals. As there is no lack of water or of its elements, oxygen and hydrogen, our attention will be confined to obtaining a full supply of carbon and nitrogen. These are indispensable, and fortunately nature has provided an amount of carbon and nitrogen in the air, if not in the soil, more than equal to all the wants of vegetation. A large portion of the fertilizing elements of vegetable mould, in a rich soil, is carbon, and a small portion is nitrogen; both of which are usually combined with other substances. These important elements are often nearly exhausted in fields which have been unwisely cultivated; and I have paid much attention to the subject of cheap and practical renovation.

"By the aid of clover and buckwheat, dressed with gypsum, ashes, lime, or manure, and plowed in when in blossom, much can be done in the way of augmenting the rich vegetable mould so desirable, to a certain degree, in all soils. Straw, cornstalks, leaves of forest trees, and swamp muck, made into compost with lime and ashes, are of great value. Charcoal well pulverized, and saturated with urine, I regard as the cheapest and most useful fertilizer that can be applied to a poor soil, for the production of wheat or almost any other crop.

"The earths contained in charcoal, as the analysis of its ash demonstrates, are identical with the earths found in the wheat plant. Coal contains a very large portion of carbon, and will imbibe from the atmosphere a large quantity of nitrogen in the form of ammonia and its carbonates. Unlike stable manure, the salts of lime, potash, soda and magnesia, it will not

waste by premature solution nor by evaporation. On the contrary, it is of incalculable value to mix with the liquid and solid excretions of all animals, to absorb and fix in a tangible condition those volatile, fertilizing elements, which are so prone to escape beyond our reach.

"When it is recollected that without nitrogen in some form, it is utterly impossible to grow one kernel of good wheat, and that a pint of human urine or four quarts of that of the cow, or one quart of that of the horse fed on grain, contain nitrogen enough to supply sixty pounds of wheat, we may begin to understand something of the money value of this animal product. But mind this suggestion. Nothing is sooner lost than the hartshorn in an open smelling bottle, or a large share of the ammonia in free urine in a warm atmosphere. Charcoal and gypsum will absorb it in large quantities, and give it out at the roots of plants as their wants require. In feeding plants, great judgment should be exercised. At least one-half of the food fed out to them in the shape of stable and barn-yard manure, is entirely lost. It escapes into the air, or is dissolved prematurely, and carried like the potash in water running through a leach, beyond the reach of your hungry, if not starving plants.

"I have just separated a half pound of wheat flour into its proximate elements of starch and gluten. The gluten I have in my hand. It is nearly identical with animal muscle. It forms from seven to thirty-five per cent. of the bulk of wheat kernels. The more gluten flour contains, the more good bread a given number of pounds will make. A barrel of flour rich in gluten, will make ten per cent. more of bread than one which is nearly all starch. Gluten will bear far more water than starch. The quantity of this meat-forming principle in wheat, depends in a good degree on the quantity of nitrogen in the soil where the wheat is grown."

From the Maine Farmer.

TURNEPS AND TURNEP LIQUOR.

We do not know whether the common flat English turnep, as we call it, is any more nutritive in England than in America. We presume that there is no difference, and yet the farmers make great account of it in England, while here most of our farmers despise it. It has been asserted that the culture of turneps has more than doubled the stock in Great Britain.

It seems that men so shrewd, and so well able to calculate profit and loss as the English are, would not cultivate this root so largely if there were no profit in it. They can raise everything that we do, except Indian corn. Why, then, should there be so much difference in their and our mode of rearing and feeding stock? It may be answered, that their climate, being more moist than ours, enables them to raise turneps easier than we do; and their winters being milder, enable them to let their cattle run among the turneps and gather for themselves. We are willing to admit this, but at the same time remark, that all do not let their stock run out among them during the winter, but gather the turneps for the cattle; and some go so far as to cook them by steam, and find a profit in it.

We propose to give an abstract of a statement made by Col. Scobel, President of the Penwith Agricultural Society, on the subject of steaming turneps for his stock. He stated that he had tried this mode of feeding for twenty years, and that the more he tried it the more he was satisfied with it. He fed them, steamed, to his cattle, sheep, hogs and horses. His cattle amounted, for the last three years, to one hundred head, eighteen colts, seventeen horses, and about one hundred and twenty pigs. He stated that it did not require any more hands or help to steam and feed them out, than it did to feed without steaming. He said that he did not fatten his pigs on turneps, but asserted that he kept all his store pigs in good order by the drainage of his steam vat—that is, the liquor which was condensed and settled to the bottom. He did not steam the turneps over much, merely softening them. His theory is this: There is an acid in the raw turnep skin which physics the animal too much. By steaming, he extracted this, and softened the outside, which was much better than steaming them to a pulp. He also stated, that when thus cooked, they could be given to any extent in any weather, and that they would have the same effect as oil cake or hay and grain.

A Mr. James, who lives neighbor to Col. Scobel, said he had also followed the plan, and for five years had fed his horses and pigs on steamed turneps, and he was satisfied that there was nothing so good for feeding store pigs as the condensed liquor which was drained from the vats. It must be remembered that he cannot obtain Indian corn there at a price which will warrant its use. If he could, he would probably not have made such an assertion; but nevertheless, if the above statements are true, it is an object worth a trial even here, where Indian corn can be raised abundantly.

We give these statements to our readers, not because we know any thing in regard to the merits or demerits of the kind of food spoken of, but as agricultural news, and to let them know what the practice and views of farmers in other parts of the world are in regard to a root that is looked upon here, at the present day, with not very favorable eyes at least. Perhaps some of them may find themselves in a situation to give the plan a trial without much expense. If so, we hope they will do it, and let us know the results.

From the American Farmer.

THE SMUT IN WHEAT.

In looking over the Prices Currents in the chief wheat markets this summer, we have noticed unusual quantities of smutty wheat, and consequent reductions in the prices between such lots and sound wheat. The existence of this disease should not be permitted among farmers and wheat growers, as unfailing preventive means are wholly within the control of all. Unlike the rust, the smut may be prevented, by a very simple and unexpensive process. Such being the case, as the disease not only lessens the product to a very great extent, but depreciates the money value of the grain, and impairs the quality of the flour made from it, common prudence, and a becoming attention to one's interest, would seem to indicate, that every wheat grower should take the necessary precaution with his seed wheat, to prevent the unpleasant recurrence of the disease. All experience of wheat growers go to prove, beyond controversy, that smutty wheat, sown without preparation, will produce smutty wheat, whereas, when prepared, even that which had been previously blackened with the fungus, yields a grain entirely exempt from the parasitical enemy of the plant.

It is not our purpose now to enter into an examination of the various supposed causes which tend to produce the disease; for, at best, the opinions of the various writers must be supposed to be mere speculations, as there are scarcely any two who agree upon the subject. Nor shall we attempt to describe the appearance of the grain when affected by it, as all such information is unnecessary, the experience of every wheat grower having enabled him to anticipate us in that part of our information: it is, therefore, sufficient to the object we have in view, to point out a sure and effectual remedy, and at the same time to urge it upon all wheat growers to avail themselves of it the present fall.

The preventive means used, consist of various steeps, in which the seed wheat is to be immersed for 12 or 24 hours previous to being sown. These are—

1. A brine made of common salt.
2. A ley made of ashes.
3. A ley made of lime—and
4. Stale urine.

Each to be graduated to a strength that will float an egg or a potato. Salt is probably the best.

After the wheat shall have been thus soaked or steeped the requisite time, it should be drained through a basket or sieve, and dried either in lime or ashes, taking care to add a sufficient quantity of either to cover the grains well. While the seed wheat may be in the soak, it should be stirred two or three times well; the light or imperfect grains as they may float upon the surface to be skimmed off and fed to the stock.

The most perfect and effectual method of treating the seed wheat, would be, to wash it in pure water prior to putting it in the soak. By this process you make assurance doubly sure; though we do not consider it indispensably necessary, as the soaking and dusting will answer without it, unless, indeed, the grain be more smutty than usual.

It would be well to change the *soak*, after every parcel of wheat may have been soaked in it; and it is important that the grain, as taken out, and dried, or dusted in lime, or ashes, should be immediately sown and covered. It may remain for 48 hours in the soak without danger of impairing its vegetative properties, though there is peril of that effect being produced, should the grain be permitted to remain any considerable length of time unsown after having been taken out of the soak and powdered with either ashes or lime.

That the *smut* is an infectious disease, there is not the slightest room for doubt; for innumerable experiments prove the fact; but it is equally true, that it is controllable by a resort to the simple means we have pointed out. Then, why should it be permitted to exist and interfere with the interests of the farmer?

Besides the certainty of exempting the product from the disease, the soak operates beneficially, in promoting an earlier germination, and by urging forward the young wheat plants to form rootlets, thus entrenching themselves in the earth a sufficient depth, and defying the bad effects resulting from frosts and the alternations between the freezing and thawing points of the atmosphere.

We have before called the attention of our readers to this subject, and revert to it now, as the approaching seeding time seems to render the occasion a fit one to elicit attention.

From the American Agriculturist.

SUBSOIL PLOWING.

We are highly gratified to observe an increased attention to subsoil plowing, for we consider, if it could be generally introduced among us, it would be found one of the greatest agricultural improvements of the age. In vol. I, page 199, we gave full details of the successful operation of the subsoil plow in England, where it was shown, that by its use, crops may be doubled without adding a particle of fertilizing materials to the land. Two year's subsequent experience by the farmers of that country, corroborate the benefits to be derived by the free use of the subsoil plow, for grain as well as root crops. Mr. Tilley recently asserted before the Cornwall Agricultural Association, that he had the past year raised hundreds of roots of mangel wurtzel, weighing twenty-five pounds each; that the crop of these, per acre, as well as carrots and turneps, was at least doubled by subsoil plowing.

Five years ago, we had a piece of land containing two and a quarter acres of a hard clay soil, which, with the best management we could bestow upon it, yielded less than one hundred and fifty bushels of potatoes to the acre, and four hundred of sugar beet—while parsnips, carrots, or any long roots, it would scarcely grow. We had just heard of Mr. Smith's subsoil plow in Scotland, and determined upon an experiment. We had no plow of this description, nor could we then obtain one: we accordingly took the mould-board off from a large, strong road plow, and used the point of the share alone for subsoiling. We plowed the land in the fall of the year, by taking a common plow and one yoke of cattle, and turning over a surface furrow six inches deep. We then followed directly after this in the same furrow, with three yoke of cattle attached to the road-plow, stirring the soil eight inches deeper, making fourteen in all. This we then bountifully limed, and the

next spring as bountifully manured, and planted it with roots, and the following autumn obtained over one thousand one hundred bushels of sugar beet to the acre from it, and other crops in proportion.

Subsoil plows may now be had in this city, of excellent pattern and strongly constructed, from ten to fifteen dollars each, which will stir the earth from twelve to eighteen inches deep, requiring from two to five yoke of cattle to move them, according to the nature of the soil, and the depth required to plow.

From the American Agriculturist.

TOO MUCH LAND.

During a recent excursion in this, and some of the New England States, I was struck with the comparative sterility of land which might, by proper cultivation, become "the garden of the world." Instead of seeing fields of wheat bearing 30 bushels to the acre, we find that scarcely 12 to 15 is the yield: where two tons of hay should be cut, hardly one is the product; where thriving fruit-trees might be expected, bending beneath the weight of their delicious fruit, our eyes are pained by the sight of gnarled, stunted, and half-dead trees, scarcely able to sustain the life of the few curled-up leaves that come forth as if to reproach their owners by the sight of their consumptive appearance. If they had tongues to speak, how bitterly would they complain of their treatment. Is it because nature is so miserly, that she does not reward man for the labor he bestows on her, or because man will not let her yield a bountiful supply in reward for his labor? What is the cause of this sterility, and the complaints of the farmers that they cannot make a living, though they have hundreds of acres at their command? It is evident the fault is with themselves. They attempt the cultivation of *too much land!*

Our farmers have from 50 to 500 acres under what they call cultivation. Still they are in debt, and in many cases the more they possess the worse they are off. Their land is scattered far and near. Two acres here, and ten there, instead of being compact together. In this manner, more time is often lost in going from one lot to another, in building the fences of other people, and keeping out their cattle, than the whole income of the land amounts to. I have myself lost more time in this way in a single year, than it would take to keep ten acres in the finest condition.

What is the remedy? Sell half of your land and spend the proceeds of it on the remainder, and thus make what you have yield a liberal income. This may appear to those who have always "followed in the footsteps of their forefathers," of adding field to field to their farms, as the height of folly, but I am confident it will be their salvation. There is a good old adage, one that should be remembered by *farmers* as well as others—"Never attempt too much." Depend upon it, there is no course so suicidal as that of owning and attempting to cultivate 200 acres, when you can hardly do justice to 100. Suppose, for instance, a man has 50 acres of naturally good land, and he has but a certain amount of manure, time, &c., to use in its cultivation, which is not enough to keep it in heart, or pay that attention to rotation of crops, which it requires, is it not evident that the land, the owner, or whoever is connected with it, must suffer? Would not all intelligent persons condemn such a course? Yet how many such instances are to be seen all around us! I believe it would be for the interest of many farmers, even to give away a portion of their land, rather than have so much in their care. Self-interest tells us, it is the true policy of such a man to sell what he cannot properly use, for he would gain time to devote to the remainder, money to purchase all that it required, his crops would yield in double ratio, his land increase in value as it increased in fertility, and thus he would be in every way benefitted.

I have seen acres of the best land, overrun with daisies, mulleins, and other noxious plants, that root out the grass, and eat up the life of the soil, without affording nourishment to man or beast, which might by a little attention yield a rich harvest. But the farmer has no time to attend to it, and the land becomes worse than useless; for it is self-evident that land must either increase in fertility, or decrease in value; there is no middle way—it must afford a profit or be an expense.

Look again at the swamp and meadow lands, with which our country abounds, that are now worthless, and causing sickness and death in their vicinity. All these might be reclaimed and made the most productive land, by a small outlay of time and capital; the owners have neither, because they have too much land already calling for their attention. The muck contained in these places, can be made to pay better interest than bank stock; yea, if properly used, it may be the farmer's mine of wealth.

This leads me to inquire how are our lands rightly to be cultivated? I reply, by using the experience and directions of those who have studied the chemical formation of soils, and the effect different manures have on different soils. Much time is lost, and land injured, by the farmer not knowing the relative value of his manure, and the theory of rotation of crops, which might be saved by the expenditure of a little time and money in procuring and reading agricultural papers and books. There is too much of the saving a cent, and losing a dollar economy in this age. When the time shall have arrived that men will be willing to study the theory and practice of farming in all its details, then shall we see agricultural pursuits elevated to a proper standing and yielding a profit that shall rejoice the hearts of all. C. Casse.

Orange County, New York.

From the Plow Boy.

AGRICULTURAL PURSUITS.

So wide is the field of the farmer's labor, and so many the objects connected with his various employments, that we see no reason, having aught of sound argument, why the farmer should not be the most learned of men. They have more to do with the element of nature than others, and are practical chemists, depending upon the earth for subsistence; they, by time, separate, modify, and change the simple and compounds, so as to afford the several elements of which the vegetable kingdom is composed, thus making of the farm a workshop and laboratory. In plowing and preparing his land for seeding, he is a practical mineralogist and geologist; in observing and preventing the ravages of destructive insects, he is a practical entomologist. Indeed, to enumerate his various employments would be hardly possible. He is the practical botanist and meteorologist; but it is quite improbable that one man should be perfect in all these branches: yet the farmer, by a more attentive examination into the cause and effect of all which occurs under his immediate observation, may become a better natural philosopher than heretofore, and, by the cultivation of his mental powers, command and retain that respect to which he is so justly entitled, as one of the producers of the wealth of the nation, and as one of the many pillars of the constitution. Of all the various employments which have from time immemorial engaged the attention of men, none have been so pre-eminently useful, more honorable, nor so nearly connected with our interest as nations, as individuals, than agriculture; its pursuits offer to the ingenious mind more opportunities for research and experiment than any other science, yet it is a lamentable fact, that there exists among the farmers an apathy to the pursuits of knowledge, and a want of that spirit of inquiry respecting the nature and habits of those objects upon the perfected cultivation of which depends the production of real wealth. What is the cause of this? A want of the proper estimation of the pursuit of agriculture. Is the cultivation of the soil regarded with contempt? 'Tis an abused idea, and we believe it too generally prevails, else why are so many of our young men engaging in the professions, too full, long ere this, for the country's good? and why are so many ensconced behind the counter, to learn the art and mystery of measuring a piece of tape? and why are the many mechanical branches so completely overstocked, while agriculture, the main support of the nation, holds out so many inducements for its pursuit, at once more interesting, more profitable, and, as improvements are made, less laborious than either the professions, the mechanical, or mercantile pursuits?

Agricultural pursuits may be made profitable; and the farmer's profits are sure, while, by the fluctuations of the market, the merchant or manufacturer may be robbed of the reward of their labor. They may have done everything which intelligence and industry could to insure success, and yet, at the year's end, wind up business with a loss, not only of profits, but capital too: but this cannot happen to the industrious farmer; his capital is invested in the soil, and he draws upon a fund which has never failed, since time immemorial, to honor all just demands: his profits may be diminished, but never wholly suspended. Although they are more imposed on than any other class of the community, and have less money, still they may grow rich. The mechanic may earn his six, eight, or twelve dollars a week, yet his condition is no better at the year's end than when he commenced it; while the farmer, earning from fifty cents to one dollar a day, grows rich. If the artizan lays down his tools, and the professional man is idle, they are sinking money: not so with the farmer; if he sleeps, his wealth still accumulates. Indeed, the mechanic, physician, merchant and idler, may receive their thousands yearly, yet die poor; while the farmer scarcely receives as many tens, and lives and dies as the lord of the soil. Many deem farming fit employment for such only as have not sense enough to pursue anything else; notwithstanding the glaring facts, that from the soil is drawn nearly all the wealth of the nation.

From the Boston Cultivator.

RECLAIMING EXHAUSTED LANDS.

Messrs. Editors—I present you with the following experiment in reclaiming worn out lands, which will be read with interest; for the mode adopted is so judicious and rational, that such a course of procedure must of necessity prove decidedly advantageous under any circumstances. I have no doubt the plan of mixing lime with earth before using, would be found of far greater importance in the application of that article to land than any other mode; allow me, therefore, to call the attention of your readers to the circumstance of the compost acquiring, by frequent turning, "the appearance and smell of soaper's ashes," and proceed to give, in the words of the writer, the following interesting statement. S. Marshall.

I will inform you the Rockland Farm exhibited a subject for experiment, as it has been reduced by cropping. Having read in various books the result of sowing plaster and clover, it was presumed that the sowing of these would be the extent of the expenses required to fertilize the fields in a few years; but the experiment proved that the plaster and clover used were both lost, as no one could point out, at any season of the year, what field they had been deposited upon. The soil was a cold or heavy clay, blue, white, light, brown, and a few spots of red clay, loaded with hard blue stone and rocks, chiefly quartz, mixed with iron and copper. Some of the experiments were made with plaster; others were made by top-dressing with lime, at the rate of 25 to 30 bushels per acre; the lime being brought 25 miles from the kiln, and laid on the land at 25 cents per bushel. It was formed into a bed, six inches in thickness, and covered with earth that had been plowed and thrown over it before it was slaked; a heavy harrow was passed over it as soon as it had been reduced to powder, and the bed of lime and earth was then *frequently turned* by the plow and harrow, until the whole assumed the appearance and smell of soaper's ashes, containing about ten parts of common soil to one of lime. It was then carted

and spread regularly over the field; and in every instance it gave a return of clover, equal to ten loads of stable manure to the acre. The idea of mixing the lime and earth, was suggested from spreading the refuse of lime and sand gathered from about buildings, and laid upon the fields, the effect of which I observed, was more immediate than any equal quantity of clean lime, although the mixture of lime and earth was equally so; the succeeding rains carrying the fertilizing principle of the lime, as from a sieve, into the soil below, completely dividing it, and rendering that which was before too compact and cold for the roots of the grass and grain to live in, both warm and open—when immediately the whole soil, which before felt hard under the foot, became so elastic that persons of observation, by walking over the field even in the night, distinctly told how far the lime and earth compost extended: the color of the soil was likewise changed into that of chocolate: now these effects seemed to prove that anything which would separate the particles of the soil and admit the air, would render these cold and heavy clays warm and fertile, the free intercourse of air carrying off the acid, &c.; and to meet this idea, plowing in the fall was adopted and found successful. As an experiment, one half a field, six years ago, was plowed in the autumn, the other half in the spring; but that part which was plowed in the spring, has never yet brought grain or grass equal to the other. Spreading manure in the autumn from the compost heap, has also been attended with universal success, both upon grain and grass; the salts of the manure being carried into the soil by the rains upon the breaking up of frost, which had in some measure prepared the soil to receive it. Vegetable substances have also been covered with earth, and when well rotted, the compost has been used with the same success as stable manure; and so long as they operate in separating the soil and promoting the access of the air, they fertilize and change the color of the mould. W. Young.

SOUTH CAROLINA STATE AGRICULTURAL SOCIETY.

In consonance with a resolution passed at the last meeting of the South Carolina State Agricultural Society, the following premiums are offered for stock, at the exhibition to be held in Greenville, on the 2d Wednesday in September next.

For the best Stallion over 5 years old, for Harness purposes, a Silver Cup,	$15 00
For the best Stallion over 5 years old, for Saddle purposes, a Silver Cup,	15 00
For the best Stallion or Colt, under 5 years old, a Silver Cup,	10 00
For the best Mare or Filly, under 5 y'rs old, a Silver Cup,	10 00
For the best Mule, over 3 years old, bred by a member, a Silver Cup,	10 00
For the best Mule, under 3 years old, bred by a member, a Silver Cup,	10 00
For the best Bull, over 1 year old, a Silver Cup,	15 00
For the best Bull, under 1 year old, a Silver Cup,	10 00
For the best Milch Cow, a Silver Cup,	15 00
For the best Heifer, under 1 year old, a Silver Cup,	10 00
For the best Boar, over 1 year old, a Silver Cup,	10 00
For the best Boar, under 1 year old, a Silver Cup,	5 00
For the best Sow, over 1 year old, a Silver Cup,	10 00
For the best Sow, under 1 year old, a Silver Cup,	5 00
For the best Ram, a Silver Cup,	5 00
For the best Ewe, a Silver Cup,	5 00

The local Societies are requested to appoint Delegates to the meeting at Greenville, on the 10th of September, and a general attendance of the members is most earnestly requested.

The papers friendly to the Society are requested to publish the above till the meeting.

W. B. SEABROOK, President.
J. B. Davis, Secretary.

COMPARATIVE VALUE OF ARTICLES USED AS FOOD.

Professor Silliman has given a translation of M. Dombasle's experiments with several articles in feeding animals. Seven lots of seven sheep each were selected, of nearly equal weight, kept in separate divisions of the stable, the weight of each lot ascertained once a week, and the experiment continued five weeks. One of the lots was fed exclusively on lucerne hay, of which each sheep was found to eat 15 pounds per week. Each of the other lots received half the quantity of lucerne, and enough of other kinds of food named to keep them in good health, and of the same weight. The kinds of food used were, dry lucerne, oil cake, oats and barley, raw potatoes, cooked potatoes, beets and carrots: of these substances, the quantity found necessary to equal the half ration of 7½ pounds of lucerne, withheld from all the lots except the first, was as follows:

Oil cake,	4½ lbs.
Barley,	3½ "
Oats,	3 "
Raw potatoes,	14 "
Cooked potatoes,	13 "
Beets,	16 "
Carrots,	26 "

or in other words, 23 pounds of carrots were only equal to 7½ pounds of lucerne hay, 4 pounds of oil cake, or 3 pounds of oats. It may be remarked that the quantity of water drank by each lot of sheep was also accurately ascertained, and while those fed on grain and oil cake used during the experiment about 200 quarts of water to each lot, those fed on roots did not use 100 quarts; and those on carrots, only 36 quarts.

PRODUCTS OF NATIONAL INDUSTRY.

Professor Tucker, of Virginia, estimates the products of our national industry as follows:

Agriculture,	$654,387,597
Manufactures,	239,836,224
Commerce,	79,721,087
Mining,	42,358,761

MAPLE SUGAR.

It cannot be generally known that the great increase in the manufacture of this article is driving West India sugar out of the market: we have been informed that 10,000 hogsheads of maple sugar are sold annually in this city. There is scarcely a farmer in the interior of this State who has not a grove of maple trees from which he makes all the sugar he requires for family use. By mixing a little hot water in the syrup, it makes capital molasses. Great improvement is making in bleaching and granulating maple sugar, and by chemical process depriving it of its woody taste. In time, no other sugar will be used in this country, (excepting, perhaps, cornstalk,) and we can make it in any quantity and at a trifling cost.

To preserve Hams or other smoked meat through the summer.—Wrap up the meat in tow, of either flax or hemp, after shaking out the loose shives, and pack it in a barrel, taking care that there be next the barrel and between the meat a thick layer of tow, packed in as close as possible; then set it away in a dry cellar or upper room. It is enough that the barrel be sufficient to keep the mice out, as no fly or insect will enter the tow.—*Ag. Almanac.*

Arkansas Insects.—The last Arkansas Traveller tells a good story of a citizen of that State who, while on board a steamer on the Mississippi, was asked by a gentleman "whether the raising of stock in Arkansas was attended by much difficulty or expense?"

"Oh yes, stranger—they suffer much from *insects*."

"*Insects!* Why, what kind of insects, pray?"

"Why---*bears, catamounts, wolves*, and sich like insects."

The stranger stopped further inquiry, nor did he deem it necessary to explain to the Arkansas man some passages in Goldsmith's Natural History.

Distraining for Rent.—"Speaking of Turkey," a man up town, on going to dinner a day or two ago, found a magnificent turkey, smoking hot on the table.

"Ben," said he to the boy waiting upon him, "where the devil did this turkey come from?"

"Why, sa," replied Ben. "dat ar turkey is been roostin on our fence dis two night, an dis mornin, I *seize him for de rent ob de fence!*"

A great nigger that! We have a shrewd suspicion that he understands the laws of Turkey much better than his master.—*Pic.*

Paralysis.—A correspondent of the Boston Mercantile Journal communicates to that paper the following extraordinary cure of a case of paralysis. Can there be anything in the mode of *treatment* pursued?

A few weeks since, a gentleman in Salem was seized with paralysis of the left arm, and to use his own words, "it seemed as if a sword had been thrust through his arm from the shoulder to the fingers, and it instantly fell powerless at his side." He hastened to his physician, and he pronounced it a plainly marked case of palsy. He in some degree recovered the use of the same, but it still remaining in a bad state, in company with a friend he went to Ipswich for recreation and exercise, hoping to receive benefit from the same; after strolling about upon the sea shore, and becoming much fatigued, he found a resting place upon the sandy beach. During his siesta, his hand became imbedded in the sand: very shortly a violent prickling and twitching sensation commenced. Receiving encouragement from this unexpected return of action in the part, he excavated a place in which he placed his arm, and covering it up, soon fell into a quiet sleep, and so remained about an hour. On arising he found to his surprise and delight, that he had entirely recovered the use of this arm, and he still has perfect use of the same.

A Yankee Wager.—The cool and collected manner in which a Yankee will come the 'cute,' says the Flushing Journal, over his more obtuse neighbor of a few degrees Southward of "down East," was exemplified in an incident which came under our observation a day or two since. A jovial, good natured and tall harum-scarum dealer in wooden bowls, who has been peregrinating our neighborhood with a wagon load of the article, and by his off-hand and dexterous management, has supplied almost every other house with his ware, stopped at the Flushing Hotel, and was accosting its guests to purchase, and expressing himself willing to effect a bargain on almost any terms, by regular sale, barter, or by wagering on "politics, religion, or any thing else;" hurrahing for Henry Clay, &c., and finally offering to bet that the great Kentuckian would obtain the electoral vote of his own state—Maine.

Mine host of the hotel, who has implicit faith in Polk and Dallas, to stop the mouth of the bowl vender, offered to bet six of the best wooden bowls, at fifty cents each, Clay would not get the vote of Maine; which was immediately accepted by the shrewd Yankee, who insisted that the contract should be reduced to writing; which on being done, it was agreed that the bowls should be deposited in the hands of some third person until the election contest was decided. But when our Yankee asked our friend Hover where were *his* six bowls to put along with them, it appeared as though the ribs of the spectators would have split asunder by their uproarious laughter. Our friend of the hotel offered to purchase them at the stores; but when we came away, the Yankee was driving a bargain with mine host to supply him on much cheaper terms than they could be procured of the store-keepers. It can be easily imagined how the affair ended, viz; that the Yankee sold his opponent six bowls, leaving other particulars out of the question.

The advice of a wise man is to be considered as a prediction.

DURABILITY OF SALT AS A FERTILIZER.

Some four years ago, we applied six barrels of (spoiled) salt fish to a strip of potatoes in a field of four acres, in comparison with yard manure. To every hill, we put half a herring or mackerel, at the time of planting. The season proved a very dry one, and while the vines in the other parts of the field suffered greatly from the drought, those where the salt fish was used, maintained a dark, vigorous and healthy color, vines very large, long, and continued green some time after the others were shriveled, dried and dead. On raising, we found them much larger in size, and nearly double in quantity, to those where the yard manure was applied.

At the time, we attributed the great yield over the others, to the animal substance, as nothing but the bones of the fish were found in the fall, but on further reflection and observation, we are inclined to think that the salt was the most powerful agent after all, as will appear from the crops taken off the three following years.

The next crop we took from the same field was Ruta Bagas, and that part where the fish was used, showed a much more vigorous growth of plants, maintained the same dark, healthy appearance, and could be distinguished from the rest at a great distance, but on lifting them in the fall, we found that the great growth of top was at the expense of the bottom; the bulbs were smaller than those in the other part of the field; thus for Ruta Bagas, it proved rather injurious.

Last year the field was sown with oats, and produced a very heavy crop. The strip where the salt fish were used, was visible to the eye, at a great distance from the field, and the straw much larger and longer; but just before the heads filled out, a severe storm of wind and rain prostrated it; before which it was the most vigorous growth of oats we ever beheld.

After the oats were taken off, we had it plowed deep, the stubble well turned under, harrowed and rolled until well pulverized, and then sowed with wheat, and stocked down with clover and timothy. The plants soon made their appearance, and grew off vigorously in the fall, but owing to the small quantity of snow, and the severity of the frost in the winter, much of the grain was killed, which gives it rather an unsightly appearance, and looks a little patchy.

On passing the field a few days since, my attention was arrested by the vigorous growth, dark color, and the heads presenting in full bloom, were much taller, better tillered in that part of the field where the fish had been applied, while on the other parts, the heads of the wheat just began to present themselves. The lines where the fish was used, could be traced by the eye at a great distance.

The question now presents itself—which is it that has been such a lasting and powerful agent in producing such extraordinary fertility? Is it the flesh, the bones, the salt, or all combined? The animal matter disappeared the first season, and nothing but the bones were to be seen, and the quantity of salt was so small, that it would seem hardly possible that it would have such an effect. Salt as a manure for grass lands, meadows, &c., has been used in all parts of England, with varying success. It is said to sweeten the herbage, and when sprinkled about, and over a portion of pasture, cattle, sheep and horses, will constantly repair to this salted portion, in preference to any other part of the field. It evidently, therefore, rendered grass more palatable to live stock, and upon consulting the old agricultural writers, it was found that the notices of salt as a manure, were many and important, and that it had been used in various agricultural operations, from a very early period.

Salt renders the earth capable of absorbing the moisture of the atmosphere, "a property of the first importance, since those soils which absorb the greatest proportion of moisture from the atmosphere, are always the most valuable to the cultivator."—*Ag. Chem.*

Its fertilizing properties, when applied to land, may be described as five in number.

1st. In small proportions, it promotes the decomposition of animal and vegetable substances. Salt, therefore, promotes the rapid dissolution of animal and vegetable remains, contained in all vegetable soils.

2d. It destroys vermin, and kills seeds, which are thus converted into manure.

3d. It is a direct constituent, or food of some plants; and it has been clearly ascertained, that if salt is applied to a soil, the vegetables afterwards growing on that land, are found to contain an increased proportion of common salt.

4th. Salt acts on vegetable substances as a stimulant. And

5th. Salt preserves vegetables from injury, by sudden transitions in the temperature of the atmosphere. That soils do not freeze so readily as usual, when salt is applied to them, is well known; and that salt preserves crops of turneps, cabbages, &c., from injury by the frost, is equally well estal lished.—*Johnson.* B.

From the Maine Farmer

THE WAY FRIEND HANSON MURDERS TWITCH GRASS.

We examined a field of corn the other day, belonging to our neighbor, Moses Hanson, which had formerly been covered with twitch grass, or as some call it, couch grass, one of the worst pests, as every person knows, that could torment a farmer. The *dry bones*, alias *roots* of the plant, were lying in great plenty in every direction, but thoroughly dead, while the corn was growing in great luxuriance upon their remains. If we mistake not, the following is the history of its management. A year ago last spring, he turned the sod over flat. He then carted on his manure and spread it. He then took his horse, and with a small plow turned the manure, but not so deep as to disturb the sod. He then harrowed it, and planted the long red potato which was hoed as usual. The potatoes soon covered the ground, and so shaded what was left of the grass that it could grow but very little. After the potatoes were dug, he took his plow and team and turned the sod, which had now become partially rolled up on its edge, leaving it so during the winter to receive the close embraces of Jack Frost, and he did hug it tight last winter, "that's a fact."

In the spring, he run the harrow over it and planted his corn—manuring it in the hill. This has been hoed twice, and there isn't twitch grass enough left alive to feed a hog with.

From the Maine Farmer.

SPIRIT FOR CHILLED LAMBS.

Mr. Holmes—Although the usual season for lambs this year is passed, yet I should hope the following would be remembered against another season. If sheep lamb after the middle of April, as they should do, they are liable to lamb in the night, or in a cold storm, and the lambs become chilled with the cold, and die in consequence. A friend of mine mentioned to me that he had heard it said that spirit (rum) was the best thing to be given—made suitably weak by water, and sweetened with molasses; and that this year he had one opportunity to try it, and it succeeded to his most sanguine expectation. Every thing that will benefit the rearing of sheep and production of wool, appears important to me, and, as I think, is important to the State. Elijah Wood.

Winthrop, August, 1844.

BLACKBERRY SYRUP.

This is said to be almost a specific for the summer complaint. In 1832, it was successful in more than one case of cholera. To 2 quarts of juice of blackberries, add

1 lb. loaf sugar,

½ oz. nutmegs, ½ oz. cinnamon, pulverized,

½ oz. cloves, ¼ oz. allspice, pulverized.

Boil all together for a short time, and when cold, add a pint of fourth proof brandy.

From a tea spoon full to a wine glass, according to the age of the patient, till relieved, is to be given at a dose.

☞The man who makes his potato-ground feed flowers, prevents its feeding his children.

From the Maine Farmer.

"I came to the place of my birth and said, "The friends of my youth, where are they?" And echo answered, "Where are they?"

BY JOHN S. LYNDE.

I journeyed on to sunset skies,
Was eager to be there,
To gaze on scenes with longing eyes,
That once were dear and fair.

'Twas when the moon was soaring high,
In clear and starlight heaven,
The whippoorwill soft warbling nigh
The mournful song of even,

That here I sat me down alone,
Beneath my childhood tree,
And called to mind those days far gone,
Those days no more to be.

I dwelt on hours long flown away,
Old scenes to memory come,
I thought of all so bright and gay,
That blest my early home.

The rocks and trees beside the stream,
That youthful band so dear,
Their music came all like some dream,
Lost notes on memory's ear.

'Twas here we met in school-boy play,
When sunshine lovely smiled,
Beneath the trees all green and gay,
I played a joyous child.

The grove that stood beside the spring,
Long years had hid from me,
The trees were fell, and every thing
Had passed time's surging sea.

O'er that fair field where once I toiled,
Green waving branches hung,
The garden old had grown a wild,
In which the blackbird sung.

The clear bright spring that filled the cup,
When boys were let from school,
Had ceased to boil and sparkle up,
Was but a stagnant pool.

The old round rock on which I played,
And drank the mountain gale,
Was rolled away, and downward strayed,
Laid low within the vale.

And that old house and home I left,
When life was young and gay,
Of inmates all, was now bereft,
For each had gone his way.

In that dear cot my mother sung,
Her cradle songs of yore,
The swallows lived—and round it hung
The insects on the flower.

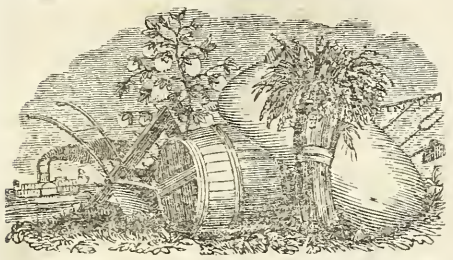
The friends I loved, the things I knew,
Had vanished most away,
And all the strange remaining few,
Wore locks of silver grey.

'Twas then I dreamed of friends of yore,
Their cold and mossy graves,
Bright scenes of youth, deep darken'd o'er
By time's devouring waves.

All things had changed, most friends had fled
Like fading hues of day;
A voice came up from death's dark bed,
And echoed, "where are they?"

August 4, 1844.

Soap-suds to kill Plant Lice.---Mr. Thos. Sinclair, of Brighton, tells us he has been using whale oil scap to kill the lice on his fruit trees. He uses but two pounds of soap with 14 gallons of water, and he finds it fatal to the lice on the leaves and tender twigs. He applies the suds by means of a syringe, and he says it makes the leaves look more thrifty than before.—*Mass. Plowman.*



WEDNESDAY, SEPTEMBER 4, 1844.

☞Numerous complaints have been made by the Farmers in Putnam county, and other places, during the past month, that gypsum (plaster of Paris) no longer acted beneficially upon their land. The reason of this is thus explained by Leibig:—"When we increase the crop of grass in a meadow by means of gypsum, we remove a greater quantity of potash with the hay than can, under the same circumstances, be restored—hence it happens, that after the lapse of several years, the crops of grass on the meadows manured with gypsum diminish, owing to the deficiency of potash." From this extract, it will be seen that nothing is wanted but the application of ashes or potash to the land, when plaster will again act upon it with its former good effects. Plaster will also be found beneficial again after manures have been used for a few years, more especially when made of an intermixture of swamp-muck or peat-earth.

☞It is stated, in the Albany Cultivator, that Ireland contains about 15,000,000 of acres of land under cultivation—only 4,000,000 more than the State of New York; yet Ireland, with a population of about 10,000,000, exports annually more grain than the whole territory of the United States. From government surveys lately made in Ireland, it is stated there is yet remaining five millions of acres, unimproved, capable of profitable cultivation.

It is also stated there are 15,000,000 of acres of a similar character in England and Scotland; so that it cannot be supposed that those countries, notwithstanding the vast advances they have lately made in agricultural improvement, are as yet anywhere near the highest limit of production.

WOOL.

We see it stated in the Tennessee Agriculturist, that Messrs. Buger & Chappell, of New Orleans, advertise for $1,000,000 lbs. of Wool, which is destined for the French market. This will open a new era in the agricultural business of some parts of our country, ad pted to wool growing, as it is said the demand for the new market thus opened will be permanent and increasing.

It has been thought heretofore, pretty generally, that a cold climate was necessary for the production of fine wool, but it would seem that this conclusion does not rest on a good foundation. Some specimens purchased by the above house, at Nashville, Tenn., have been pronounced by the agent the finest samples of wool he had ever seen in this or any other country.

☞Rheumatism having once seriously attacked sheep, the malady will seldom be completely eradicated—so kill the disease at once. There are a thousand proofs (says the Nashville Agriculturist) of the existence of this complaint in sheep. It is particularly prevalent in low marshy countries, in exposed situations. It principally attacks old sheep and young ones. It sometimes appears as an inflammatory complaint, and fever accompanies it; and at other times it has all the characteristics of a chronic disease, the walk of the sheep or lambs being stiff and cautious, marking the rheumatic patient.

☞An exchange paper very truly says, sensible men and women never sneer at mechanics and others who earn their living by their labor. But self-styled gentlemen and ladies not unfrequently do. We have heard of a "lady" who once left a ball-room because a mechanic entered. She married a basket-maker, and died a washerwoman.

☞The best kind of field-bean is of small size, plump, round, and slightly oblong in shape, and of a white color. It is common in the Eastern States, and one of the finest samples of it is now being distributed over the country by that indefatigable friend of agriculture, the Hon. H. L. Ellsworth, Commissioner of the Patent Office.

LUCERNE.

In no former period (says a correspondent of the Mark-Lane Express,) have I experienced the value of lucerne, as during the present protracted drought. I have now nearly finished my first crop, which I have been cutting green for horses and cows, much of which measures in height 36 inches, and very thick. My second crop is now from 24 to 26 inches high, and as thick as the first. I am now about cutting this for hay. It does not appear to be in the least affected by the severe drought, which I attribute to the very great depth the roots run down. I would again urge all farmers to try to grow lucerne; for of all summer food for horses, this is the very best. I am inclined to say, likewise, nothing can be better food for cows, for my own have lived entirely upon it the last three weeks, my feeding pasture being quite burned up for want of rain, and have produced a full quantity of butter.

SALT AND SOOT.

The effect of salt, (says the Boston Cultivator,) when combined with soot, is extraordinary. The Rev. E. Cartwright found, that in one row manured with this mixture, he obtained two hundred and forty potatoes; while in an adjoining row of the same length, treated with lime, the yield was only one hundred and fifty.

☞It is stated that the ship Orpheus, at Baltimore, from Chili and Peru, brought 400 tons of guano. A few more such importations will reduce the price of the article materially.

☞George Bancroft, Esq., the historian of the United States, is to deliver the annual address before the New York State Agricultural Society.

Value of Toads.—A person lately opened a toad in a wheat field, and found sixteen beetles in its stomach, which the patient animal had probably snapped up while they attempted to cross the path.

From the American Farmer.

TABLE OF SOILS.

Thaer, a very eminent agricultural writer, one who is of received authority, thus classifies various soils and their adaptations to the several crops enumerated—from which persons who may be improving their lands may judge of the quantities of manures, vegetable, animal and mineral, necessary to be applied, having first ascertained, by analysis, the constituent elements of which their lands to be improved consist of.

Systematic Names	*Usual Name.*	Clay, p ct.	Sand, p ct.	Humous pr. ct.	Lime, p ct.
Humous Clay soil,	Strong wheat soil,	74	10	4½	11½
Strong Humous "	" " "	81	6	4	8½
" " "	" " "	79	10	4	6½
Rich Marley "	" " "	40	22	36	4
Humous loose "	Mead. or green pasture soil,	14	49	10	27
" sandy "	Strong barley soil	20	67	3	10
Rich Clay "	Strong wheat "	53	36	2	4
Marley "	Wheat "	56	30	12	2
Clay "	" "	60	38		2
Loamy, "	" "	48	50		2
" "	" "	68	30		2
" "	1 class barley "	38	60		2
" "	2 " " "	33	65		2
Sandy Loam "	2 " " "	28	70		2
" " "	Oat "	23½	75		1½
Loamy Sand "	" "	18½	80		1½
" " "	Rye "	14	85		1
Sandy " "	" "	9	90		1
" " "	6 years rye "	4	95		¾
" " "	9 years rye "	2	97½		¼

Average small quantity of lime

COCKLE BURR.

We gave in our first number a fact, (says the Mississippi Farmer,) communicated to us by James Quesenberry, one of our subscribers, respecting the poisonous effects of this weed upon hogs. The editor of the Southwestern Farmer gives an instance of a friend of his who lost his entire stock of hogs by eating the cockle-burr. J. A. Hamilton, a correspondent of that paper, gives the following case, which is entitled to the highest credit, and it confirms the opinion of our correspondent, Mr. Quesenberry, that the cockle-burr is poison, at the time it is swelling and sprouting to grow, although at other times it may be harmless.

"We have had a similar disease among hogs in this neighborhood to that in Hinds. I have heard several complain of losing their hogs; but none can give the cause of their death. I have been more unfortunate with Mr. Affleck's hogs this season than I ever was with hogs before, but cannot attribute it either to cotton seed or peas, for they had not access to either. When I came here in November, the hogs were running in a sweet potato field, and corn field adjoining it; were fine and fat: when the potatoes were gone, I turned the hogs into a different field, which was intended for their pasture, and had been let grow up in cockle burrs last year, and fed them bountifully with corn. They seemed to do well until the burrs began to come up, when they commenced dying, in fine order. Having heard, from some source or other,—I do not recollect where—that young burrs would kill hogs, I turned them into another field that had no burrs in it, and fed them on boiled cotton seed, and, to my satisfaction, I lost no more hogs until I turned them again into the burr-field: after they had been there about a week, they commenced to die again. I then turned them into a field of green oats, where they have been ever since, without losing any more of them. From this trial, I am induced to believe that young cockle-burrs will kill hogs."

Drink for Haying.—Let farmers who are now hard at work haying, have for drink, milk porridge with corn meal in it. This keeps off fever in the stomach, and is better for allaying a feverish thirst than almost any other beverage.

MARLING IN SOUTH CAROLINA.

That there has been, within the last two years, a greatly increased and growing interest in the subject of agriculture, excited among Southern planters generally, is apparent to the most casual observer; and that its march will continue to be onward, diffusing its benefits upon all classes, needs not the spirit of prophecy to foretell. Evidences are not wanting to attest the truth of this remark—they are to be found in the formation of numerous Agricultural Societies throughout the entire South, and particularly in the old States, for the diffusion of knowledge, and the excitement of a generous and laudable rivalry among our people; in the greatly increased attention which is everywhere bestowed on the subject of manuring: and last, though not least, in the desire everywhere manifested for the diffusion of information by means of agricultural papers and periodicals.

These are the proofs, and they are not only abundant, but daily increasing—and they give earnest of a brighter and more glorious era, in the progress of this important science, than has ever dawned upon the sunny South—an era which will be distinguished for the diffusion of its countless blessings and unparalleled prosperity among all classes of our people. We rejoice, heartily rejoice, at the flattering prospects which the contemplation of this subject discloses to our view. We see in it the evidences of a strong and abiding attachment to the hearths and firesides of our youth, and the homesteads of our fathers—the indulgence of which noble feeling, while it will arrest the tide of emigration that has for so many years been going on, depopulating the old States, and transferring many of their most valuable and enterprising citizens to the regions of the far west, will prompt to the beautifying, adorning, and enriching those spots endeared to us by so many thrilling associations. Such will be as certainly the result of that spirit now exhibiting itself among our planters, as that effect follows cause; and the day is not far distant, when the States of South Carolina and Georgia will boast a more intelligent, enlightened, contented and prosperous people, than has ever tilled their soils even in their virgin purity and richness.

The march of South Carolina to this high destiny is onward and rapid. She has seen and felt the deleterious influence of a system of agriculture which has laid waste her lands and depopulated the State, and her Legislatures, like wise men and patriots, have stepped into the breach to arrest the downward tendency of things; and in that spirit which became a prudent and enlightened people, have ordered a survey of the State by a competent and scientific agriculturist, which is already beginning to discover the advantages that must ere long result from such a policy. That the prospect now augurs the most happy and beneficial influences upon her agriculture and the prosperity of her people is evident, and we beg leave to introduce the following extract of a recent letter from one of her most intelligent planters, to the Editor, and also the subjoined article from the Cheraw Gazette:

"Since the publication of Mr. Ruffin's report of the "Agricultural survey," much attention has been given to the subject of marling. Marl pits have been opened on many plantations, and experiments are in progress in the hands of educated and scientific men, which must improve the spirit and enterprise of our agriculturists, and be highly favorable to the circulation of a good Agricultural paper. A great many important facts, the results of careful experiments, should be, and will be reported."

MARLING.—We are much rejoiced to learn, that many estimable citizens on the Pee Dee, have at length been convinced, by practical experiments, of the highly beneficial effects of Marling, on our exhausted and worn out lands.

We have been recently favored with the perusal of a letter, written by an intelligent, practical planter, who has become an enthusiast in the system of marling, detailing experiments made by himself, which show so clearly its astonishing fructifying qualities, that none will hereafter doubt, who are not determined to reject all proof, and remain in stubborn and wilful ignorance and disbelief.

The writer of this letter, Mr. James F. Belin, says, that he thinks the land he has marled, on which he has planted both cotton and corn, will yield him a profit, at the very lowest calculation, of *one hundred and fifty per cent. the present year!* A portion of this land was "old fields," which he supposes have been tended for over one hundred years. He says he has fifty-five acres of cotton on a part of this land, which, from present appearances, will yield between forty and forty-five bales, of 400 lbs. each. The same land, *without marling*, would not produce over eighteen or twenty bales at the outside, as has been proved by subsequent planting. In 1842, the land here spoken of was planted in cotton, without marling, and the weed did not grow above knee high; now it is in many places as high as a man's shoulders, and remarkably full of bolls—many acres, he thinks, will come very near averaging a bale to the acre.

Mr. Belin has also, the present season, 25 acres of cotton, *not marled*, from which he does not expect to gather more than ten bales, and this from a piece of fresh land, it being only four years under cultivation. This would have been considered a piece of tolerably good cotton, but it will, he says, bear no comparison with that growing on his "old fields."

The effect of marl on corn is equally surprising and satisfactory. He has planted corn on marled land, which he is convinced will yield 14 or 15 bushels to the acre, which formerly would not produce over 4 or 5 bushels; and he gives it as his opinion, that marl is the very best manure that can be applied to land, both on account of its durability and productiveness.

Mr. Henry Davis, in the same neighborhood, has also been experimenting with marl with entire success. He has cotton growing on fresh land, well marled, the stalks of which are six or seven feet high, and well filled with bolls.

Land, with marl beds on it, has suddenly risen in price, and cannot even now be purchased for many times its former valuation. All are deeply impressed with its intrinsic worth, and anxious to renovate their worn out lands from these inexhaustible mines of nature's own formation. May we not justly hope that a new and better era is dawning upon our State—an era of improvement, not of exhaustion—when her sons will cling to the homestead of their fathers, and with patriotic ardor improve the old domain, apply the fructifying marl, reclaim the "old fields," and make them once more blossom and bear, and yield to the sustenance of man?

We have heard of one gentleman who, a year or two ago, bought a tract of land, having marl on it, for $1500, and would not now take $6,000 for his purchase. Indeed, the spirit of improvement appears to have seized upon the whole agricultural community in the vicinity of the marl beds. Another highly intelligent, extensive and successful planter, we are informed, is preparing to build a steam tow-boat, for the purpose of supplying himself with marl and carrying his crops to market. This spirit of enterprise and practical improvement, is truly gratifying to the philanthropist and patriot, and augurs well for the future prosperity of this section of the State.

"Every man of us down here," says the writer of the letter from which we glean many of the facts above stated, "from Henry Davis's to Harllee's, is hauling out marl as fast as he possibly can. I have two ox-carts going, and will in a day or two have three more, and every negro I own, engaged in this business—some digging it up, and others hauling and spreading it upon the land. Mr. L. M. White has been at it for about a month before I commenced, hauling out with a one-ox cart, and spreading it on his fields. Just come down and go with us over our farms, and you will agree with us that it is by far the best manure that has ever yet been found out, or ever will be discovered, while the world lasts and the earth is cultivated."

We are informed, that contracts for any considerable quantity of marl, may be made for its delivery at the Cheraw landing, for five cents a bushel. In Virginia, the quantity used to the acre is from one to two hundred bushels, and when this quantity is applied, the land resumes its original fertility, and becomes almost inexhaustible. It may now become a matter of calculation with our planters, whether this would not be a profitable outlay of capital. It is probable, if the demand became extensive, the price of delivery would be reduced, as the supply is said to be inexhaustible.

CONTENTS OF THIS NUMBER.

Selections, Extracts, &c.

Thrifty and Unthrifty Farming.....137
Root Culture—Rotation of Crops—Deep Plowing..138
Clean Culture; Philosophy of Wheat Culture..138, 139
Turneps and Turnep Liquor.....139
The Smut in Wheat.....139
Subsoil Plowing.....139-140
Too much Land; Agricultural Pursuits.....140
Reclaiming Exhausted Lands.....140-141
South Carolina State Agricultural Society.....141
Comparative Value of Articles used as Food.....141
Products of National Industry; Maple Sugar; To Preserve Hams; Arkansas Insects; Distraining for Rent; Paralysis; A Yankee Wager;.....141
Durability of Salt as a Fertilizer; To Destroy Twitch Grass; Spirit for Chilled Lambs; Blackberry Syrup; Poetry, by J. S. Lynde; Soap-suds to kill Plant Lice.....142
EDITORIALS.—Wool; Lucerne; Salt and Soot; Table of Soils; Cockle Burr, etc.....143
Marling in South Carolina.....144

BACON'S LARD LAMPS.—A new article, superior to all others for this purpose, emitting a good clear light without smell or smoke, and at an expense, counting Lard at 8 cents a pound, of about a quarter of a cent an hour.

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SOUTHERN CULTIVATOR.

VOL. II. AUGUSTA, GA., SEPTEMBER 18, 1844. No. 19.

ORIGINAL COMMUNICATIONS.

For the Southern Cultivator.

PREPARING COTTON FOR MARKET.

MR. EDITOR—In the first No. of the present volume of the Cultivator, I promised you that I would, at a suitable time, give my brother farmers, through the columns of your agricultural paper, my system of preparing my cotton for market. Being this far on my way home from the West, where I have spent the summer on an agricultural tour, I now comply with my promise of giving my plan of putting up my cotton, and I must first say that it will be found extremely difficult for the cotton planter to prepare the great Southern staple as it should be done, while he is all the time going for quantity, and not for quality; but still he may, however large his crop may be, prepare a portion of it as it should be, if he will take the necessary trouble and pains.

But to the point. I take all the care I possibly can in picking it out of the field, endeavoring to keep up with the opening as near as possible, taking all the pains I can to pick it clear of trash: I then dry it thoroughly on a scaffold, keeping one hand picking it over while the cotton is drying: I then pack it away cleanly in bulk, and suffer it to remain until it becomes heated. My finest cotton last year remained in bulk about two months—this year I think of letting it remain three months in bulk. After it has remained long enough for the oil to be drawn from the seed into the staple, to give it that beautiful cream color so much admired, I then commence ginning. I gin it very slowly on a fine saw-gin, picking it over again as it is ginned, so as to get out any remaining trash that may be in it. I have a flue that is fixed to the gin, through which the cotton passes, after leaving the brush. The flue is eight feet long, and is so constructed as to let all the dirt and trash drop in a box below, as the cotton passes over the fingers of the flue: the cotton passes from the flue into the cotton-room. I never suffer much to be packed in the room before I commence putting it in bales: this is done with the greatest care. I press it down with a screw, instead of treading it with feet, as every pressure defaces the cotton to some extent. My bales weigh about 480 lbs. I sew up my packages very nicely, and put up my cotton in the best of bagging.

Now, I request the farmers, before they condemn my plan as too tedious, to make the trial, and they will find it a money-making business. I would, however, state, that I make three qualities of cotton: my first and second qualities, I plainly put my name on, and the place of my residence, the third quality I put the letter M on.

I would have waited until I reached Eufaula, Ala., before I wrote, but presuming that some of the growers of cotton might desire to try my plan, and as the season was passing away, I determined to write from this place. At a future time, I will give you some account of my trip to the West.

With the greatest respect, yours, &c.,

ALEXANDER MCDONALD.

For the Southern Cultivator.

A SHORT CHAPTER OF EXPERIENCE.

Transplanting Peach and Apple Trees; Smut in Wheat—how prevented; Rust; Charcoal; Coal-tar and Soot; Tar and Sand; Lime will kill Wheat; What is the best Method of Improving Fresh Lands?

MR. EDITOR—Some time since, I saw it announced in your paper, that it was a good method, to keep worms from the roots of peach trees, to put half a gallon (if I remember correctly) of ashes around the roots when transplanted, and a less quantity every spring thereafter upon the ground around the tree.

Last spring, I had a quantity of peach and apple trees set out, after the common mode, of which three of the former died. Some short time afterwards, I had a few peach trees of a rare variety, and some few apple trees, to set. As I prized them highly, after placing the tree in the excavation made for its reception, I deposited perhaps one gallon of ashes around the roots, then a layer of dirt, then a quantity of water, then filled the hole with ashes and dirt, and applied more water. The result was—every peach tree died; and but one apple tree looks like doing well, while one or two more are showing only a faint prospect of ever budding again.

You will perceive I used more ashes than was recommended, which shows the importance of one's going by the directions, as prescribed to him, in following out an experiment.

Two years since, I rented a piece of land to sow in wheat, which was cut and thrashed while wet. It was pronounced, by all who saw it, to be the blackest they had ever seen. This I had washed well, but could get no white flour. Several writers in your paper recommended blue-stone as a preventive—no one of them, I believe, gave the relative portions of each, and the length of time the wheat should be soaked. One said one pound of blue-stone to five bushels wheat—another said neither blue-stone nor brine was a preventive, but the wheat should be soaked in both of them—a third said, if kept in a cool place it would keep two or three days. I therefore made a solution of salt, (it should be made strong to bear up the light wheat and all the oats which may be in it,) poured slowly into it one bushel of wheat, frequently stirring it, and skimming off everything that would swim, and let it soak six hours. I then put the wheat into another tub, poured in nearly water enough to cover the wheat, then emptied in a solution composed of three or four ounces of blue-stone, which had been dissolved in warm water, stirred it up well, and let it set twelve hours. I used the same brine by adding a little more salt and water, and the same solution of blue-stone by adding three ounces more blue-stone, for every bushel of wheat sown. I also rubbed the wheat in ashes before sowing it. I often examined it, and only found one head of smut in ten or twelve acres.

If it be said the dark nights in October kept out the smut, I here add, that I sowed in the same field, and on the same day I finished the other, a half a pint of the prettiest and the whitest-looking wheat I had ever seen—which produced about a hundred heads of smut, because I did *not soak it*.

In thinking on this subject, I have thought the wheat should be soaked in blue-stone first, as a considerable quantity of salt adheres to the grains, which, if sown, would probably add to the fertilizing properties of the earth.

There is another difficulty—the rust. Some writers say the French have prevented this disease by using powdered charcoal—yet none of them, whose productions I have noticed, state the quantity the French use for that purpose.—As we have no machines for that purpose, would it do to dampen the coal, and beat it up in a large trough?

The Agricultural Society of South Carolina, in their report of 19th June, state, "We would recommend, in the highest terms, the use of the coal-tar to preserve the seeds from birds." Nor have they stated the relative quantities of each, coal-tar, soot and corn.

Some five years since, tar and sand were recommended to me for the same purpose. I then prepared my tar, sand and corn, and planted ten acres, not one grain of which have I seen since. This also reminds me of a gentleman in Monroe county, Ga., who prepared his wheat in lime, and sowed forty acres, none of which ever came up. Persons who recommend a new project, should also give the proportions, time and manner, of carrying out their views.

There is one question I wish to propose to some of your correspondents. I am now making my fourth crop on gray land, with a clay foundation near the surface, with a few rocky spots, though they are small. What method shall I adopt to improve the land to the greatest advantage with the least expense? Would it do to sow down in rye, corn, buckwheat, or peas, and turn the green crop under? If so, at what time of the year, and what kind of a plow? Yours, &c., P.

Salem, Russell county, Ala.

For the Southern Cultivator.

SMUT IN WHEAT.

Mr. Editor—I discover that you have several correspondents, giving various means to prevent the smut in wheat; and as this is an important matter, I will give you one.

My neighbor, Alexander R. Bell, of this county, has long been considered a great wheat grower, and a great many persons are in the habit of sending some distance to purchase his wheat, on account of its superior quality. About the time he was cleaning his crop, I happened in, and he took me to his barn to show me his great yield: I was astonished to find that there was no smut in his wheat, and remarked it to him. He said no, I never have the smut in my wheat. I inquired the means of preventing it, and he gave me the following:—Sow your wheat the first of October, and when you harvest, let what you intend to make seed of, remain five or six days longer in the field before it is cut, and by this means all the grains will be perfectly ripe and good. This is all he does to prevent the smut, and he never has it in his wheat.

I stated that I had went out to see his yield, which I found to be fine. He sowed one bushel and a peck of wheat, and it yielded him forty bushels and a fraction over: it was as nice and as fine wheat as I ever saw, and made good flour. Yours, respectfully, W.

Columbia county, Geo.

From the Boston Cultivator.

THE FARMER'S ODE.

Let Commerce spread her flowing sails
And Trade her path pursue;
Without the Farmer what avails,
Or what without him can they do?

Let learned Divines and Lawyers boast,
Let Physic follow in their train,
The Farmer's skill is valued most
In making golden sheaves of grain.

Let Statesmen rack their brains with care
Some mighty project to fulfil;
The Farmer's wiser projects are
His flocks to feed, his grounds to till.

His orisons at early dawn,
To the Almighty Power he makes,
Then treads the dew-bespangled lawn,
Or pleasure in light labor takes.

He hears the robin's early song,
And ruder notes of cheerful swains,
While heedful of his crops, along
He travels o'er his own domains.

A stranger he's to fretful care;
No busy schemes perplex his life,
Contented with his homely fare,
His children and a prudent wife.

He labors to improve his soil,
While Ceres shows him her regard,
And blesses all his careful toil,
In fruitful crops for his reward.

No prodigal nor careless waste,
On his domain is ever found;
With open hand he yet will haste
To help the poor till they abound.

And now his earthly labor's past,
And old in virtue he has grown;
To crown his well-spent life at last,
Kind heaven shall claim him for its own.

H.

Quince Stocks.—Pears grafted on the quince, appear not so easily affected with insects, or the fire blight.

SELECTIONS, EXTRACTS, &c.

From the American Agriculturist.

ORGANIC IMPROVEMENT OF DOMESTIC ANIMALS.

Sheep and other animals were subdued and domesticated long before their biped captors and masters were able to keep a record of their doings for the benefit of their posterity. Hence we know little of the original stock from which our domestic animals have descended, and less of the early treatment they received at the hands of our own progenitors. Nor is this information important. It concerns us mainly to understand how a change of food, temperature, and of all surrounding circumstances, will either *improve* or *deteriorate* the organic structure and natural functions, which transform for the practical farmer his cultivated plants, their seeds and roots, into wool, beef, pork, milk, lard, butter, and cheese. That there is a wide difference in the results obtained, by the operation of this living machinery in different animals, no observing man can doubt. Of two cows of equal weight, and consuming equal quantities of food precisely alike, one will elaborate for its owner eighteen quarts of milk in twenty-four hours, while the other can form but nine quarts in the same length of time. A pig, whose organization is apparently nearly perfect, will elaborate from a given amount of raw material, twice as much flesh and fat, as another whose respiratory and assimilating machinery are very defective. Experience and science alike demonstrate the truth of the remark, that it takes fifty per ct. more food to produce a given amount of muscular strength and power of locomotion in one horse or ox, than is required in another. Animals that had a common parentage ten generations back, now possess not only widely different forms, but organic and constitutional peculiarities, of great importance to those that may become rich or poor, according to the well or ill management of their herds and flocks. Eminent success alone attends skill in the breeding and keeping of domestic animals. This valuable skill is acquired by close observation, and studying the uniform laws of nature that govern the growth, maturity, and decay of organic beings. The most important and material changes in the development of the organs of animals, and in the function of each organ, are made during the period that elapses from the first formation of the embryo, to the maturity of each living complex structure.

"As the twig is bent, the tree's inclined."

The plasticity of young animals and plants, and the extreme changes that may be wrought in their forms and habits, are truly wonderful. The human brain itself can be moulded in infancy into any shape to suit the whim or taste of a "Flat-Head" or a "Round-Head" Indian. Nor is there a single mental or physical function in the human system, that may not be either improved or impaired by the good or bad influences which may be brought to bear upon it. The science of physiology is a noble science. It enables cultivated reason to trace results—the products of animal life, such as flesh, fat, milk, and wool—back to their known causes and elements.

I can hardly expect to give you even an outline of the organization and workings of this complex vital machinery. There are, however, a few cardinal points in this matter, which I will endeavor to make clear and intelligible.—One is, that no animal or plant can possibly transmute one simple elementary substance into another. If a hen be fed on food that is quite destitute of lime, the organs of her system cannot form an egg-shell, so if a child, colt, or calf, be kept on food that lacks phosphate of lime, its bones will be soft and cartilaginous. No other minerals can be changed into lime or phosphorus.

Animal fat is a compound made up of carbon, hydrogen, and oxygen; and no other simple elements can possibly make it. Lean meat and wool contain the same elements, with the addition of nitrogen, sulphur, and several other earthy ingredients in minute quantities.

Knowing that no animal can create anew one particle of matter, and that each compound product has its peculiar constituent elements; knowing also how much of those elements is contained in any article of food, we can judge of its fitness or unfitness to produce either bone, muscle, fat, milk, wool, or any other animal product. In other words, we can wisely adapt our means to the ends we have in view.

Suppose a farmer had one hundred hens in his poultry-yard, and he desired them to lay as many and perfect eggs as possible. Would it be an unreasonable prescription to say to him that "you must feed them liberally on food which contains not only lime, but all the elements of the contents of an egg-shell in a concentrated form? Deny not the raw material, if you expect the bird to elaborate for your table, or for market, a large product of this article of human food."

Is it anything extraordinary that a race of cows, whose mothers for many generations have had their milk-forming organs largely developed by being fed on food well adapted to that end, should secrete far more milk from a given amount of raw material, than a race of wild cows, whose lacteal glands had been denied all the advantages that result from quietude, rich pasture, and regular dry milking?

A sheep consumes several pounds of food daily. Of this, at least eight ounces are composed of the constituents of wool. Now if the capillary organs of this animal transform only two per cent. of these elements into wool in twenty-four hours, then in one hundred days the sheep will grow one pound of this valuable product. This will give a fleece which will weigh 3 65-100 lbs. in 365 days. Is it not practicable so to improve the vital action of the wool-forming machinery of our twenty millions of sheep in this country, that this machinery shall transform four instead of two per cent of the raw material of wool into that substance? That this organic machinery is perfect, no one pretends to doubt; or that it has already been greatly improved, is not denied. The manufacture of wool out of its constituent elements, is a branch of science of great importance to the farmers of the United States. They possess an inexhaustible quantity of the raw material of wool, and enjoy every advantage for its profitable production. To develop the capillary organs of the sheep, the animal should have a warm, or rather a comfortable, well ventilated apartment in winter—should be kept quiet throughout the year; that is, it should not be compelled to travel too much to find its food. It should have the organs that form this animal product *at all times* stimulated to a preternatural action, by having the arteries that convey nourishment to these organs, preternaturally loaded with the elements of wool. A plant grows best in a soil rich in the elements of such plant. So, too, with an animal, and especially a young animal, elaborates the most flesh and fat when its blood-vessels are best supplied with the elements of those products.

Clover, oats, turneps, beans, peas, and other leguminous plants, contain more of the constituents of wool than timothy, herdsgrass, potatoes, and corn. All animals should be fed regularly, and particular attention should be paid to their health and comfort. It is, perhaps, needless to say, that every improvement in the practical workings of all this living machinery can be transferred from parent to offspring by judicious breeding.

The action of the respiratory organs in all domestic animals has a material influence upon the formation of fat, muscle, milk and wool. The lungs never cease night nor day to expel more or less of the elements of animal food through the windpipe into the air, in the form of carbonic acid and vapor. The organization of some animals is so defective that they consume in this way a much larger quantity of the constituents of flesh, fat, milk and wool, than is necessary or profitable. The more an animal exercises, the faster he breathes, and other things

being equal, the poorer he becomes; because, instead of nourishing and supplying the waste in the system, the elements of the food escape in a larger ratio from the assimilating organs. The food of animals consists essentially of carbon, hydrogen, oxygen, and nitrogen. The first escapes through the lungs, the second and third escapes in vapor, perspiration and urine, and the last (nitrogen) also escapes by the kidneys. Hence, a cow, when driven twelve miles a day, never gives as much milk as she does when consuming the same amount of food and remaining quiet in a pasture or stall. It is an easy matter to enlarge or diminish the size of the blood-vessels that convey the elements of milk to the lacteal gland of the cow, or the vessels that convey the elements of wool to the capillary organs of the sheep. It is not difficult to increase both the size and strength of the muscles of a colt, or of a young bullock. Like the enlargement of the muscles in the arm of a blacksmith, judicious exercise must come to the aid of judicious keep. D. LEE.

Albany, April 30, 1844.

From the Southern Agriculturist.

EXPERIMENTS WITH MARL.

We are very happy in hearing, that many planters in various parts of the middle and lower districts of our State, are seriously marling their highland crops, in the cultivation of corn, cotton and peas. The number of acres marled by each, is no accurate test of the zeal, faith and industry of the planter—his relative ability to plant more or less—the facility of procuring his marl, and of carting it to his fields—with a variety of minor considerations; all have great weight in our estimate of his enterprise.

In the last April report, published by the Agricultural Society of Black Oak, in St. John's Parish—a section of the State abounding more with marl than almost any other—they state that upwards of 1,200 acres are under cultivation, having been marled in the preceding year. Of these, they state the number of acres marled on twenty-five of the plantations, amounting to 1,113 acres. This report is entitled to the utmost confidence, it being from a Committee of Inspection, in which are some of the most practical, liberal and enlightened planters in the State. They evidently discriminate, not giving the names, but declining to publish the experiments of some, who, from want of information or other cause, are not conducting these experiments properly. They have excluded 100 acres of marled land, probably on this account, and others may have escaped their notice altogether. They appear, also, to have excluded all who applied the marl this year to the present crop, because it could not have had a sufficient time to become incorporated properly with the soil. We have heard of some persons, and in that neighborhood, also, who say that they are marling their fields, and only apply from ten to twenty bushels per acre. This may proceed from want of information on the subject of marling: it probably will, by its total failure, mislead and discourage them, and such of their acquaintances as are equally ignorant of its inadequacy. We suggest that the Agricultural Societies should warn all within their influence, of the certainty that such experiments will fail, and issue handbills showing the proportions of marl to different descriptions of land, and to the quantity of vegetable matter and of animal manure, that it may have to act upon—reducing them to the best state for nourishing the crops.

One gentleman, well informed in other respects, said that he was about to procure a boatload of marl for his field this last spring: on being asked how he intended to use it, he said, that he would try it fairly, and put at least a double handful of marl to each corn hill. If he did this, he probably lost his crop, and would blame the marl for it, instead of blaming his own inexperience.

Every planter in the middle and low country, should put into his overseer's hands a pamphlet, teaching the advantages of marl, and the best mode and proportions in using it; insisting that the addition of vegetable matter is indispensable to the beneficial use of marl and other stimulating manures. A.

AGRICULTURAL SOCIETY OF S. CAROLINA.

REPORT OF THE STANDING COMMITTEE.

The Standing Committee of this Society, on the expenses incurred on Produce of the State, would beg leave to submit statements relative to the sums expended on domestic imports:

They do not wish to touch on any speculative doctrine of political economy, involving the necessity of mutual exchanges for reciprocal advantage, but propose to show in what articles our money is expended, and whether any balance remains. The Committee leave it to the good sense of the Society, and the community in general, to determine, how far many of these expenditures are inevitable, or whether they may be moderated for the good of the State. In the extended trade between the North and the South, it is very difficult to ascertain the accurate amount of what we buy, and the statement now submitted does not pretend to effect more than approximate to the truth. It may, however, give some clue to the labyrinth of domestic trade, and invite those well informed on particular items, to add such correction as may finally lead to something like a correct statistic. The object of the Committee is simply to exhibit a debtor and credit statement of our receipts and expenditures, as a suggestion of the propriety of producing for ourselves, much of what we now purchase, so as to retain at home so much of the proceeds of our labor as will enlarge the resources and comfort of every family in the State.

To strike a balance, the value of exports must be stated.

Export of 60,500,890 lbs. Cotton,	$6,000,000
" 80,000,000 lbs. Rice,	2,000,000
" Lumber and other commodities,	500,000
Total Exports,	$8,500,000

IMPORTS OF 1843.

Sugar,	5,917 hhds.	5½ cts.	$383,922
Coffee,	38,294 bags,	8½ or $13	501,722
Molasses,	4,359 hhds	24 cts.	135,000
Flour,	52,000 bbls.	$5	260,000
Corn,	300,000 bushels,	50 cts.	150,000
Oats,	100,000 "	30 cts	30,000
Peas,	40,000 "	62 cts.	24,000
Hay,	24,826 bundles,	87 cts.	74,478
Bacon,	5,000 hhds.	6 cts.	300,000
Lard,	20,000 kegs,	6½ or $3	60,000
Butter,	18,750 kegs,	$12 each,	225,000
Salt,	91,122 sacks,	$1 30	118,458
Cheese,			30,000
Plows and Garden Implements,			20,000
Northern Hardware,			250,000
Machinery,			200,000
Horses, Mules, Cattle, Hogs,			1,775,000
Building Materials, Lime, Granite, Carpentry, &c.,			150,000
Equipages,			150,000
Furniture,			50,000
Shoes,			1,081,700
Hats to ¼ of 256,000 whites at $4,			340,000
Dry Goods,			2,000,000
Foreign Imports,			1,588,852
Total,			$9,808,932
Travelling expenses must be computed as one of the regular drains to the State, 2,000 persons at $300,			600,000
Total Imports,			$10,408,932

The discount against this sum, for re-exportation, may be thus estimated.

Sugar, 383,922 Coffee, 501,722 Molasses, 135,000	1,020,644,	deduct ¼,	$255,161
Hardware,	250,000	deduct ¼,	62,500
Lard,	60,000	" ¼,	15,000
Foreign Imports,	1,553,852	" ⅓,	526,284
Dry Goods,	2,000,000	" ½,	1,000,000
Deduct from $10,493,932 this am't,			1,858,945
			$3,639,987

This exhibit of imports has been compiled from the account current files of the Mercury and Courier for 1843, corrected as far as practicable by merchants most likely to possess accurate information. The importation of corn last year, was comparatively small, owing to the failure of the North Carolina crop; but in years past, has considerably exceeded the amount specified, though at present on the decrease. The greater portion of our Sugar, Coffee and Molasses, particularly the first two, is received coastwise, notwithstanding freight and distance. Much of this import is distributed throughout the State. The aggregate of all these items, shows a considerable balance against the State, moderated by the probable discounts for re-exports to Georgia, North Carolina, Tennessee, and Alabama.

Although the cost of the Sugar, Coffee and Molasses, is merged in the foreign imports, yet so large a portion comes coastwise, and does not appear on our Custom-House books, that a deduction must be calculated as well from those items, as from the foreign imports. From the foreign imports, a third may be deducted for re-exportation, and from the dry goods at least one half. The amount of dry goods from the North is probably more than two millions, but it is impracticable to arrive at an estimate. The importation of dry goods to Columbia, Georgetown, and Hamburg, enter considerably into our calculations. Independent of our catalogue of expenses, a considerable amount is spent for beef, pork, fish, baskets, pails, mats, and a thousand other articles. The fact that we have no surplus, is confirmed by the stationary amount of coin in the country. If our exports exceeded our imports, the surplus would be paid for in specie, but the statements of the Banks show, that in an average of years, the amount of coin imported and exported, balances—incontestibly proving that we are not in a prosperous condition. Again—if what may be said of a community of individuals, may reflect some idea of the condition of a State or nation, and we refer for an example to the planting interest in particular—it will be established that the planters are generally incumbered with debt and complaining, yet tributary everywhere for many of the necessaries of life. As we are essentially an agricultural people, it is fair to conclude, a sympathetic influence pervades other sections of society, and that our habits and pursuits require reform.

All which is respectfully submitted.

R. W. ROPER, Chairman.

From the Farmer's Cabinet.

IRRIGATION.

It is said that "Van Helmont planted a willow, which weighed 5 lbs., in a pot containing 200 lbs. of earth. This he watered for the space of 5 years, and at the end of that time the tree was found to weigh 169¼ lbs., while the earth in which it had stood, being dried as at first, was found to have lost only two ounces. Here, then, was an increase of 164 lbs. weight, and yet the food of the plant had been water only."

If, then, watering is attended with such great results in the case of a tree, is it not reasonable that, in the case of herbage, it is still more important? It is not by any means, at this day, contended that the only food of plants is water; but water generally holds in solution minerals, which are food for plants; and it carries those dissolved minerals to the roots of plants, exactly where they are wanted. Land may have all the necessary minerals and manure, indispensable to plants, and yet in a dry season the grass won't grow; how important, then, is irrigation, if only to dissolve those minerals.

Mr. Liebig, I think it is, who says that in Germany, lands which have formerly been nearly barren, have been made, by irrigation, very productive. The mode adopted in this country for watering meadows, is considered by many as too expensive: they have consequently plowed up their meadows and do not water at all. What the mode of watering is in Germany, I do not know, but I would respectfully suggest the use of a wheel mentioned by Dr. Arnott, in his Elements of Physics, by means of which, "streams are caused by their own action, to lift a part of their water into elevated reservoirs." For the purpose of watering meadows, where streams lie high, a small portable wheel of this kind, of about three feet in diameter, would save the labor of making a great many small channels. But where the water is situated low, and

is required to be raised a considerable height, "a large water-wheel is placed so that the stream may turn it; and around its circumference buckets are attached, to be filled as they sweep along below, and to be emptied into a reservoir as they pass above; or instead of buckets, the spokes of the wheel are themselves made hollow and curved, so that, as their extremities dip into the water at each revolution, they receive a quantity of it, which runs along them as they rise, and is discharged into a reservoir at the centre. These are called Persian wheels, but they are in common use on the banks of the Nile, and elsewhere."*

I would suggest the formation of agricultural clubs, to make trial of such wheels, and for other improvements. All the expense of such a wheel, defrayed by a club of ten or twenty members, would be so small to each member, in comparison with the great object gained, that the expense would be no objection. A wheel for the purposes of farmers generally, would not cost more than five dollars. RUSTICUS.

Lancaster county, Pennsylvania.

*These wheels are frequently used in this country for the purpose of raising water for tan yards.

From the Central New York Farmer.

IMPROVEMENT.

MESSRS. EDITORS—After the very polite and flattering invitation you have given me, publicly and privately, to write for your paper again, I should do injustice to you and violence to my own feelings, did I not comply with that request. I am willing, yea, anxious to do all that is in my power to forward the now advancing interest of agriculture. In this letter are the sentiments I entertain and cherish relative to this great subject. I have ever held that the farmer should progress with the progressing spirit of the age, and in order to do this, means must be employed commensurate to the obstacles to be surmounted and end to be attained. That farmer who is willing to beat and beat the beaten track, will be about as able to compete with those whose motto is "excelsior," as those who are fifty years behind the time in manufacturing clothes. That one who will unhesitatingly assert that he knows all about farming, and that there are none who can teach him, shows to an enlightened farmer that he is basely ignorant of the business which he disgraces by his bungling mode of conducting his affairs. That man who says an agricultural journal is a money-making machine *merely*, convinces me at least that he never had one in his hand—that he knows nothing of their aims or accomplishments. He who is too illiberal to give 50 cents or a dollar a year for a paper, which might be worth fifty dollars to him, will not be very apt to expend much in improving his farm. My friends, men who will indulge in denouncing such noble public spirited men as Buel, Bement, and a host of others, as asking self-aggrandizement—gratifying their thirst for public applause, and only aiming to fill their pockets, having gulled the people into their measures, to buy their stock, take their papers, and follow their system of farming; I say, sirs, such men must be possessed of a spirit contemptible in the extreme. They are no more fit to be farmers than a hottentot is to be President? Fit, did I say? language is inadequate to say of such men what I honestly think. Have they no ambition? Are they cherishing the sentiment that farming is mean, and not respectable? They know nothing of the *true* farmer. Do they feel that they are overlooked by the "professionals?" Rise, thou sluggard, and come forth with all that dignity of which the intelligent farmer is possessed! Assert your rights—claim your place due you in society, and drive from your bosom the thought that tilling the soil is mean. Mean to till the soil!! The farmer a bondsman! I answer those, and those only, who make themselves such for lack of energy.

"We hold these truths self-evident, that all men are created equal:" such was the feeling of our forefathers, and such the feeling of the philanthropist of the present day. Legislation comes to our aid, protects our industry, and encourages our enterprising spirit—she fosters the germ which the most brilliant talents of the world have watered. Sirs, the whole superstructure of national greatness rests upon the intelligent portion of the farming class. Is it not wisdom for legislation to protect her interests? Those nations who have given agricultural concerns and men the highest place in public affairs, who have acknowledged their worth, respected and protected their civil, religious and political rights, have been the most happy, prosperous and independent nations of the earth.

Men spend whole lives in the cultivation of the intellect: this is well and commendable when used for good purposes. Men make attainments in every branch of business very rapidly; so rapidly that it almost taxes our credulity to believe what our eyes and facts convince us as truth. Why is it? What means are employed? From ten thousand sources we hear the reply in thunder tones, application and experiments combined, have effected all this. But the experimentalist is to be set aside as seeking self-aggrandizement, and to be looked upon as getting above his business. But such sentiments and their supporters are soon to be forgotten, while those who are fast surmounting these difficulties and prejudices will have a place in the hearts of their countrymen alongside Washington and kindred spirits. The one leader of the revolution of '76—the other leader of an agricultural revolution of the present age. One had to contend against superiority of numbers and wealth—the others against nine-tenths of those who are theoretically engaged in the same business with himself. The one was victorious, and reaped a rich reward; the others are destined to achieve a signal victory, and receive the thanks and applause of coming generations for the obstacles they have and are still to surmount. Their march is onward and upward. Men of brilliant talents and noble souls are putting hand to the work, and begging those who are nominally farmers, to join with them and help to dispel the bug-bear clouds which hang in imagination about the pathway of the farmer. We know full well of the effects which early training will exert over a person. We are aware that it binds all, more or less, to the customs and maxims of our predecessors; but farmers must think for themselves, or they will ever continue to beat the almost adamant track of their ancestors.

England is much in advance of us, and will continue to be until we take the same or similar steps to rival her. Has a bountiful Providence favored her more than us? Are her lands better adapted to tillage than ours? Is her climate more genial to the farming interest? Has she men who are able to rival ours in profound thinking or useful inventions? Experience, history and common sense, all combine to answer no!! Yours, truly, W. S.

Binghampton, August, 1844.

NEW YORK AGRICULTURAL INSTITUTE.

The object of this Institute is to afford facilities to those desirous of entering upon a course of study preparatory to farming, the advantage of which has been made evident by the researches of a large number of scientific men and experienced agriculturists.

The necessity for an improved system of husbandry is apparent from the decreasing harvests of many parts of the sea-board States. The present reckless tillage of too many of our farmers, reduces the finest lands to sterility by a succession of exhausting crops; and emigration is the consequence. These evils, unless speedily checked, will destroy our prosperity; for the cultivation of grain is becoming unprofitable, and too great an importation of food from the west would in a short time absorb the resources of the wealthiest eastern States. The only effectual remedy is the improvement of cultivation; not a mere application of tons of manure, and shiploads of lime, per acre, but their economical use. Common manuring has been practised from the remotest antiquity, and good crops have been obtained; *but it is the judicious addition of such substances as are necessary to the soil, in proper quantity, with a view of attaining a definite purpose, that constitutes professional agriculture.*

To individuals, this system will prove a source of wealth, even on ordinary lands. Less capital is required to hold the same surface, because every acre yields a revenue: two or three crops can be taken annually, where one is now scarcely attainable: the heavy expenses of manuring and keeping stock are reduced to a trifle; and machines can be made to perform much of the work now in the hands of laborers, sustained at a heavy expense. In maintaining sheep and cattle, the use of food properly prepared and selected for its chemical value, will reduce the charges to the lowest point, while the development of the animals is better secured.

By requiring a preliminary course of studies, and introducing the exactness of science into agriculture, it will rise to the dignity of a PROFESSION, and be regarded as a suitable calling for persons of liberal education, instead of an obscure art. Numbers of talented young men, who, after leaving college, see no other roads to distinction or wealth but medicine, engineering, law, or divinity, will direct their energies towards the improvement of farming—a change not less serviceable to the art than advantageous to themselves; whereby they exchange the uncertainty of competition in employments already overstocked for the certainty of systematic agriculture, chemistry, analysis, and physiology; and measures have been taken to introduce a course of instruction in agricultural mechanics and rural architecture. These are distinct classes, so that students can attend any separately.

In *Agriculture* will be taught all facts in chemistry, geology, and botany, useful to the farmer—the drainage and preparation of soils—the collection, storage, and preservation of provender and fruits—the feeding and improvement of stock—management of orchards, vineyards, &c.—the preparation and economy of manures, both organic and mineral, with their action and causes of success or failure. In short, all the topics embraced in the courses given by Professors of Agriculture in European colleges, will be discussed.

Chemistry, as an abstract science, is taught by Professor Draper in the University.

Anatomy and Physiology, by Professor Pattison. This course is directed more especially to an examination of the structure and functions of the human body, and may be attended with great profit to the student.

Analysis of Soils, the ashes of plants, and manures, will be conducted by the students under the direction of the subscriber, with such assistance as may be required.

The city of New York offers numerous advantages in carrying out the objects of the Institute—the facility of access—the high cultivation of many farms, nurseries, &c., in the vicinity—the conservatories and market gardens—the large collections of farming implements—the choice seeds obtainable—the numerous artificial and mineral manures that can be examined—constitute it the best locality in the United States. Good board and lodging near the University can be had for from $2,50 to $3,00 per week.

The *Institute* is situated in the University of New York. It opens the first Monday in November, and continues in session until the first of March. This period has been chosen for the accommodation of those engaged in farming. Fees for the course on Agriculture, $20; for Analysis, $30; for both, $40. The courses on Agriculture and Analysis are conducted by

D. P. GARDNER, M. D.,
Formerly Prof. of Chemistry, &c., in Hampden, Sidney College, Va.

For further information, address, post-paid, Dr. Gardner, 412 Fourth-street, New York.

Brine for Sheep.—When the salt is allowed to get wet in troughs, it will kill sheep.

From the Western Farmer and Gardener.

SPIRIT OF THE AGRICULTURAL JOURNALS.

Hay.—According to Sinclair, the nearer it approaches to ripeness, the more nutritive matter it contains. Clover should be cut when the flowers first begin to fade.

Turneps among Corn.—When from any cause corn is so thinned as to be only half a crop, make clean the ground and sow turneps. This will help to make up for the loss.

Table of the number of bushels of wheat, barley, oats and rye, to each individual in the different countries.

In Great Britain,	12	bushels.
Denmark,	20	"
Prussia,	12	"
Austria,	14	"
France,	7	"
Spain,	5	"
United States,	18½	"

This was ascertained in 1828, and it is probable that the proportions have not much changed.

Fall Fodder for Cattle.—For those who have only one or two cows and have a plat of ground, when the grass begins to decay, sow some Indian corn in drills, filled in with manure if necessary, and covered slightly. Keep it free from weeds, and every night and morning in the fall you can cut an armful, and it will come out in extra quantity and quality of milk.

Remedies suggested against the Curculio.—It being ascertained that those insects do not fly far, use the galvanic battery, a ring of copper and one of zinc, or a cup of tin surrounding the tree, in which put lamp oil ⅛ inch deep. It will prove an effectual barrier. Burn all the punctured plums, too, that fall off, to diminish the insect the next year.

Sweet Apples vs. Potatoes, for Hogs.—The apples will be found to make the most pork, and are easier raised; but they should be of the best kind, and ripe, as hogs are fond of grafted fruit, as well as men.

Chess and Wheat.—The doctrine is now exploded, that wheat will produce chess, or chess wheat; but this is certain, that when the earth is turned up, many seeds of weeds and other things are turned up with it.

Conversion of Lard into Oil and Stearine.—There are in Cincinnati not less than thirteen factories, in full operation, making from 300 to 2,500 barrels each in a season, or 100,000 gallons. The oil sells at sixty cents a gallon by the barrel, and seventy-five cents by retail. The stearine made by one establishment amounts to 750,000 pounds per annum, two-thirds of which (the summer) is suitable for making candles.—This stearine sells for seven cents per pound, which is used for culinary purposes, is equal to the best leaf-lard, and sells for six cents per lb., when well put up in kegs for shipping.

Bugs on Vines.—Almost any kind of dust strewn on vines has a tendency to keep off insects, but a new dusting will be necessary after each shower.

Fall Transplanting of Fruit Trees.—From the 20th of August to the last of September, has been found a successful time for transplanting strawberries, (these may be done earlier,) pears, plum and apple trees, currant and raspberry bushes—this according to the season, and when the summer wood has ripened. Take two spadings of top soil to mix with the roots; make the hole a foot wider than the roots of the tree. Previous to taking up the tree or bush, remove every leaf with a sharp scissors. Take up every tree in the morning of a clear day, and place the roots in a tub of soap-suds; let them remain till the afternoon, or even twenty-four hours.

Seed Potatoes.—These should not be too ripe, as they are apt to be diseased.

The Blight Insect, or Scholytus Piri.—Mr. Samuel Hatch, of Marshfield, N. Y., showed limbs of apple trees girded beneath the bark by a small beetle. It attacks pear trees, apple trees, and quince trees, and works secretly under the bark, cutting off the source of the ascending sap, and ruining the part of the limb which is above its operations. An apple tree limb was brought to the office of the Central N. Y. Farmer, which concealed thirteen little dark brown beetles in each joint or bud. On being shown to Dr. Harris, he had no doubt it was of the same species as the pear tree destroyer. Limbs thus infested should be cut off immediately and burned.

Salt on Hay.—About four or five quarts per ton, is sufficient; more may produce too much thirst in the animals eating it.

Cure for Burns.—After opening the blisters, if formed, dip the part in cold water, and then plunge it still wet in cold water for a minute or two. This prevents the air from getting to the burn.

Saltpetre.—Five rows planted with corn, soaked in a solution of salts of nitre, or saltpetre, yielded more than twenty-five rows without any preparation. No worms touched the first.

Gapes in Chickens.—This is caused by worms in the throat. Take a small feather and strip off the web, except about an inch and a half at the top. Wet the end and turn it back. Let a person hold the chicken on its back, extending its legs. The operator takes hold of its head with his left hand, placing the thumb and forefinger on each side of the bill, so as to hold the mouth open. Draw the neck out gently but firmly; introduce the feather over the tongue, and watch when the chicken breathes, which opens the windpipe; then enter it quick, and do not be afraid after the point is entered. Push down gently two or three inches, and then withdraw the feather, turning it with a cork-screw motion. The worms will follow, and others will be loosened by sneezing. This repeat once more, but not oftener. In nine cases out of ten, the cure is immediate.

Currants—as standards or trees. This does not seem to suit our climate. They require some shade and bushiness to encourage moisture.

Boston Centre Draught Plow, Prouty and Mears.—This plow, it is said, by the aid of a wheel and a new arrangement of the gearing, a late invention of the patentees, carries a furrow ten inches deep and twelve inches wide, and turning it over with the greatest ease and facility, and leaving not a vestige of the sod to TELL. It requires no holder or guide, farther than to set it into the land, and turn it out at the end; and this can be done to perfection by a boy of eleven years of age.

Decay of Fruit Trees in Charlestown, Muss.—This seems to have been going much in the same way this season, as in the neighborhood of Cincinnati, and elsewhere in the West. There is soon to be an explanation of this matter, it seems, by competent individuals, both here and at the East.

Compost Manure.—Until the earth can be brought to give something for nothing, we may not despair of reaping benefit from the well mixing and stirring up of stable manure with earth, and other proper materials for the compost heap.

Charcoal.—This mixed with loam, is still growing in favor with agriculturists. It is the most astonishing article to make use of for all purposes of cultivation; and especially for plants under artificial treatment, says an eminent horticulturist.

From the Boston Cultivator.

RECLAIMING WET LANDS.

MESSRS. EDITORS—Mr. John Chamberlain, of this town, has reclaimed about three acres of wet land, and as the beautiful smooth field now forms a fine contrast with the once ugly looking swamp, that seemed like a nuisance on the farm, I will give an account of his management, hoping his good success in improvement will encourage others to do likewise, and now is a favorable time for the business.

Drains were made around the margin, and a large one through the centre. The centre drain was made very wide with slanting sides, on which a good crop of grass is produced; and this mode of making drains Mr. Chamberlain most approves of; and many others who have made these slanting drains prefer them to deep perpendicular ditches.

The hassocks were levelled by cutting them up with a bog hoe, and then they were piled up and burnt. Then gravel was hauled on about six inches deep, and compost applied, about 20 or 25 loads to the acre. The ashes were spread on with the manure, and grass seed raked in. He commenced about three years ago, and finished last year. It is now all in fine English mowing, and the best grass on the farm, producing two tons to the acre the first crop, besides the rowen. He manures with a little compost annually. The cost of reclaiming was from 50 to 60 dollars per acre, and Mr. C. now values it at more than $100 per acre. Before it was reclaimed, it was of no profit. E. C. FLAGG.

Southborough, August, 1844.

From the Tuscaloosa Monitor.

WOOL-GROWING IN ALABAMA.

On a former occasion, we alluded to the barren and hilly parts of Alabama, to some extent, unfit for any other use, as affording fine sheep walks, that might be made exceedingly profitable in the growth of wool. We are glad that an experiment is now making, as the letter of Messrs. Harris & Clayton will show. These gentlemen, both known to us as upright and industrious men, (and good practical printers withal,) have invested capital in a flock of sheep, of various bloods, which they keep some eighteen or twenty miles north of this city, having brought them from Tennessee last spring This is the first attempt, so far as we have been informed, that has been made upon a liberal scale, with proper attention, for the production of wool as a business, in Alabama. That the increase of the flock will pay a better dividend than almost any other investment, we have very little doubt.

The samples alluded to in the letter may be seen at our office, where several gentlemen have already examined and admired them.

As an enterprise, wool-growing in the South has been comparatively untried. It is estimated that forty millions of dollars are annually paid by this country for foreign wool, a great part of which sum might be kept at home by extending the production in parts of the United States where it can be successful. Whether Southern qualities will be equal to those of the North, we are not prepared to say; but wool fit for staple manufactures can assuredly be grown here, as we trust the experiment of Messrs. Harris & Clayton will demonstrate.

The following is their letter:

TUSKALOOSA COUNTY, Aug. 25, 1844.

MAJOR MILLER—Dear Sir: Enclosed we send you a few samples of our wool, both short and long. We are now shearing our flock, and shall have near five hundred fleeces, though we do not intend clipping our ewes this fall. We hardly know whether these are as fine samples as we could send you, but we think they will form an average at any rate. These samples are all from lambs, except the Bakewell buck. He is in his second year, and cost us five dollars. The Bakewell lamb's wool is, I think, seven inches: please straighten it and measure, and give its length.* It was dropped in February. No. 7 is from a half-blood merino lamb, dropped in February, and his fleece, when we clipped it, weighed full three lbs. See how thick it grew. But just look at No. 1, 2 and 3: they would grace Prince Albert's own back, in the form of a coat. These samples are at the inspection of the public.

Very respectfully,
Your obedient servants,
HARRIS & CLAYTON.

*Full seven inches by actual measurement.

From the Central New York Farmer.

WORK FOR SEPTEMBER.

Although considerable work is expected to be done this month, still it is not so pressing as the last, but the provident farmer will always go ahead of his labors, and thus preserve the mastery of the manifold operations of his farm, as by the pursuit of such a course, he not only renders his business a source of pleasure, but one of profit.

Plowing.—Flush up the ground you intend to appropriate to small grain, and be sure to plow well and deep, and to lay the furrow nearly flat, if the ground turned down be a sward. Do not take too wide a slice, nor suffer balks to occur, as they are not only injurious to your soil, but lessen its production.

Wheat.—This crop, although not cultivated to any great extent in this vicinity, is considered, in some sections, the most important crop to which the farmer can direct his attention; it is at the same time, one of the most difficult to cultivate with uniform success. Different, and even opposite causes, must be pursued under different circumstances, in order to obtain the same desirable results, a good crop; difference of soil—difference of climate—difference in the time of sowing—and difference in the variety of seed. This last we found verified this season, as the bald wheat was nearly all destroyed by the worm, while the bearded escaped, or at least was very little affected by the insect. Material variations are frequently required in the mode of culture, which renders the business of raising wheat one of the most complex of all the branches of agricultural practice.

Soil and Preparation.—In preparing the soil for many other crops, it is rare that much caution or skill is necessary; for instance, corn requires high manuring, and a rich soil, and it is scarcely possible to carry this to excess. But with wheat, the case is otherwise; land naturally rich, or highly manured, is apt to cause, during the hot season of summer, a too rapid growth of stem, at the expense of the seed; and rust, lodging, and ultimate failure is frequently the consequence. This evil, we have found, is caused to a far greater degree if strong unfermented manure is applied, which causes a still more luxuriant growth of straw. It is an established law in vegetable economy, that an extraordinary growth of the straw and leaves is always at the expense of the fruit and seed. Therefore, unfermented or fresh manure should never be applied to land intended immediately for wheat. It is best, when practicable, to apply fresh manure to other crops which are to precede wheat. In this way the manure becomes well rotted and thoroughly incorporated with the soil by the time the wheat is sown upon it. Land may be highly fertilized by this course, without any bad effects; indeed, some of the best crops are obtained from ground enriched in this manner—instances of which may be often seen in places where large quantities of manure have been deposited, demolished buildings, &c., where grain is often three times more productive than on adjoining ground in the same field.

When the above course of manuring is pursued, land is rarely made too rich for wheat, provided it is accompanied with deep plowing. This is indeed highly important in fertile soils. Nearly all who raise large crops on such soils, have made use of deep plowing in previous years. There are, however, some very shallow soils, where the subsoil will not admit of this practice; such of course must form exceptions.

It is now generally conceded, we believe, that *rest* is of no use to land and can never improve its quality while nothing grows upon it.—Ground which is not employed in producing food for animals, should be occupied in preparing food for plants; or, in other words, instead of lying naked, it should be producing some suitable crop to serve as a coat of manure to enrich itself.

Peas, beans and clover, are among the best crops to precede wheat, as they are very different in their nature from it, and consequently afford a greater change in the succession. Clover, in particular, possesses several advantages; its roots loosen the soil, furnish excellent manure when plowed under, and unlike the natural grasses, does not form so tough a sod as to require summer fallowing in order to break and pulverize it.

A neighbor turned over a tough green sward last year, which had been pastured for two years, and after giving it a thorough harrowing, sowed his wheat early in September, from which he obtained a good crop at a very small expense.

Corn for Fodder.—The usual time for topping corn has arrived. We are of the opinion that very early cutting the top stalks is unfavorable to corn. Whether the enhanced value of the stalks counterbalances the injury to the corn, is not so well settled. Our opinion is not only against early topping, but against topping at all. We prefer to let the corn stand untopped until the grain is glazed, and then cut it at the bottom, and set it up in small stooks to dry. Care, however, must be taken not to put it away until the grain is perfectly dried; and the same precaution is necessary with regard to stalks intended for winter food for cattle. We have no fears from storms, fogs or frosts, after the corn is once stooked. We do not assert that these cannot injure it then; but we have for years followed this plan, and our corn has escaped all harm from these causes. We have never had it injured, unless the stooks have been prostrated by violent winds. Fears may be entertained, that in this situation the corn will mould. But our experience teaches us otherwise. We have had it in this situation, through successive days in warm weather, and no injury suffered. Here it is secured against frost, against birds, and mostly against the dirt, which autumn rains throw upon the leaves and husks. Let it remain in stook, until it is well dried—from three to five, or six weeks, according to the state of the weather. Large stalks stand in stook much better than small ones. The larger the corn, the better it is suited to this process of curing.

Rye.—Your rye should be put in during this month, and the sooner it is sown, the better chance it will have to resist the frosts, and of not being winter killed. Sandy or gravelly soils, are best suited to its growth, and though many affirm that it does not require that the land should be manured, we have no doubt ourself that a moderate portion of manure well rotted, of ashes or lime, would have a very salutary effect. Whatever ground it may be put upon, every possible pains should be taken to have it in fine tilth. If it be not well pulverized, it will assuredly not thrive as well as might be desired.

When sown on stubble, a good crop may be raised by once plowing, if well done, by which the weeds and stubble should all be turned under; after which, the ground should be made free on the top, with a light harrow. By sowing early, good pasture for calves and young sheep is secured, after the common grass have failed; and even in the spring it may be fed down with small stock, without injury to the crop. Another advantage of early sowing is, the roots become much firmer fixed in the ground, and are not so apt to be flung out of the ground by the frost; besides, when sown early, less seed will answer for the same ground As in the common course of farming, there is more or less land upon farms which are in good condition to produce rye, that would not produce wheat, and from which a crop of rye may be raised with as little expense: we therefore recommend to farmers to sow rye, and be careful about the quality sown, as there are two or three varieties of this, which are in common use amongst us: one kind is lighter in color than the others, and commonly called white rye; this is to be preferred, as it produces equally as well as the darker kinds, and when well ground, makes a very wholesome and palatable bread, which is preferred by many people to wheat; for mixing with corn-meal for making bread, it is allowed to be superior.

Timothy.—Now is a good time to put in timothy and red-top seed. The ground should be well manured, and brought to a fine tilth. If you desire to cut it next summer, sow it alone; if that be not your object, you may put it in with your wheat or rye. In the spring, a top dressing of a compost, composed of ten bushels of ashes, and one of lime or plaster of Paris, would be found of great utility. The quantity of seed per acre, is from 12 to 16 quarts.

Rye Grass.—If you sow now, you may graze upon it next season, without injuring it. Two bushels of seed to the acre should be sown. The ground should be prepared as for any other of the grasses.

Pilfering.—This is a season when the owners of orchards, gardens, &c., especially in the neighborhood of thick settled towns and villages, are greatly annoyed by the depredations of boys, thieves, trespassers, &c. A strange notion seems to prevail among many persons on this subject. They do not regard the taking of fruit, vegetables or melons, as *stealing*. They consider it as a kind of venial offence, rather implying smartness, than criminality. It is high time that this notion was exploded, and that those who plunder orchards, gardens, and melon patches, were taught that they are as guilty of stealing, as though they took the owner's money, horse or other property. It is not generally known that the revised statues of the State of New York, declare the robbing of orchards, gardens, &c., to be a misdemeanor, and punishable by fine, and imprisonment, or both, in the discretion of the court.

This reminds me of a circumstance which happened when I was a little fellow, just old enough to be mischievous. I was beset by a parcel of my companions, to go and pilfer the parson's pears. The tree was large, hung full, and they were of a most delicious flavor.

Whether I was afraid of detection, and a flogging—whether respect for the parson, (for in those days children were brought up to respect the pious,) prevented me; or whether I was deterred by the recollection of my bad luck in pilfering melons, I cannot remember—but I told them decidedly, I would have nothing to do with the matter, and did all in my power to dissuade them from their enterprise.

I don't know how, but so it happened, that my honesty got to the parson's ears, and on Saturday afternoon, I received an invitation to go and see him. Away I went, conscious that I had done nothing amiss: how light beats the heart of innocence! The good man met me at the door; and taking me by the hand, said, "I have heard that you refused to join in pilfering my pears. Now, I mean to convince you that '*honesty is the best policy.*' Here," added he, placing a large basket of the finest fruit before me, "eat what you please, and take as many with you as you can carry." I felt that moment happier than Napoleon with empires at his feet. And the circumstance led me to remark, in early life, the consequence of an adherence to the maxim.

B.

From the Central New York Farmer.

HORN DISTEMPER OR HOLLOW HORN.

This disease, sometimes called, likewise, the horn-ail, is often fatal from unskilful treatment, It often makes its attack very suddenly, and may be known by the drooping of the head, lopping of the ears, a glassy appearance of the eye, lashing the sides with the tail, bloating of the chest, loss of appetite, &c.

Treatment.—Bleed from the neck, and cut off the end of the tail, if it is soft and loose. Prepare a solution of salt in vinegar, and make it strong with pepper, and pour it into each ear at the temperature of blood heat: this may be repeated twice in the 24 hours as long as the symptoms require. Put a table-spoon full of spirits of turpentine into the cavity on the top of the head a few times. Give two balls of tar rolled with meal, of the size of a butternut, twice a day.

The above method of treating this disease, is recommended by Mr. Samuel W. Bartlett, late of East Windsor, Ct., as having been very successful in a large number of cases treated by himself, and others in that vicinity.

WEDNESDAY, SEPTEMBER 18, 1844.

PREPARING COTTON FOR MARKET.--Our excellent friend and correspondent, A. McDonald, of Eufaula, Ala., has favored us with his mode of preparing cotton for market, the importance of which we cannot press too earnestly upon the consideration of cotton planters. For we are well satisfied, from our observation of the sales of cotton in this city, that no labor bestowed on cotton is better rewarded than that of putting it up neatly. Purchasers always look well to the order in which it is when offered, and their bids are regulated accordingly. If in good order, they offer what they believe its value--but if in bad, they of course make a sufficient deduction from the price, to remunerate them for putting it in good order.

No idea is more erroneous than that which is entertained by many farmers, that any bagging will answer, if it be strong enough to get it to the first market. They should recollect that it has to be much handled before getting it to its final destination, either in America or Europe; consequently, unless the bagging be good, it will not be in a fit condition to be exposed to sale on its arrival, until a considerable additional expense be incurred. All these things are taken into consideration by the cotton dealer, who purchases of the planter, and the price of his cotton is regulated accordingly. A difference, therefore, of a few cents more in the yard of bagging, is but a trifling increase on each bale, while it not unfrequently affects the value of the cotton ¼ cent per pound.

Let the cotton growers reflect upon these things, and be governed by them, and our word for it, their labor will be well rewarded.

SMUT IN WHEAT.--In our last number, we copied an article from the American Farmer on this subject, and to-day we have two communications as to the means of preventing this disease in the wheat crop: and as the season for sowing will soon be here, we commend them to the consideration of the reader. The plan adopted by Mr. Bell, to avoid smut, is entirely new to us; and, if it be a sure preventive, is certainly a great saving of labor, compared with the plan usually adopted of soaking in a brine or ley, and then rolling in ashes or lime.

We hope Mr. B. will favor us with the result of his experience in reference to the matter, --inform us how long he has practised this plan, and whether it has been always successful.

☞The editor of the London Agricultural Gazette, in an article relative to the frauds practiced upon farmers by the adulteration of manures—especially guano—says: "One would think, from the constant occurrence of these frauds, that farmers were not yet convinced of the expediency of the old rule—'*Taste and try, before you buy.*'" We should rather be excused (says the Boston Cultivator) from literally practicing this in the case of manures such as guano. We should prefer some one should "taste" for us.

GAPES IN CHICKENS.—The Southern Planter has the following from Mrs. E., a "gude housewife" and great chickenarian, in relation to this subject, which may prove beneficial to many throughout the country. This disease has, in almost every case, within our recollection, proved fatal to chickens. It strikes us that Mrs. E.'s mode of curing this disease is a good one, and we therefore recommend it to our fair country-women:

"Put the chickens in a covered basket, and hold the basket over a pretty strong tobacco smoke, and smoke them till they get *drunk enough* to cease crying. But avoid the error committed by a good lady, who followed the latter part of the prescription *too* literally. She waited till the chicks had ceased crying, but waited too long: they had died. Young turkies are benefitted by the same application."

SUBSTITUTE FOR SLAVE LABOR.—Mr. Bryant Cobb, of North Alabama, proposes to give up slave labor, and to offer suitable encouragement to induce good German farmers to settle about him, also some machinists and mechanics. He is located in a fertile valley, which is well watered; it is large enough for 15 or 20 farms; several saw-mills are in operation. He proposes to furnish farming implements and one year's provisions to industrious families, and let them farms on long leases, or make such other arrangements as may be thought mutually beneficial. Mr. Cobb's address is at Cobb's Store, North Alabama, about 15 miles Southeast of Huntsville. Latitude 32 50.

POTATOES.

We think it would be worth the while of some of our Southern farmers to make a trial of the suggestion contained in the article below, which we copy from the Buffalo (N. Y.) Commercial Advertiser, relative to raising potatoes from the *seed*, instead of the potato itself. Though it will take about three years to perfect the plant propagated in this way, yet, if it will ultimately improve this valuable article, is it not worth a trial? We believe the cultivation of the Northern potato, in this section of country, has not generally been very successful. Is it not possible that this plan would better adapt the potato so grown to our soil and climate? We are not aware that any one in this vicinity has tried the plan proposed, and we therefore make the suggestion to such as may have time or inclination to try it.

"If any of our readers have an opportunity to save potato balls or the seeds of this plant, we advise them to do so. The tops with the balls on can be hung up under a shed and dried, and kept ready for planting next spring. It is the opinion of several eminent agricultural writers, in Germany, Russia and Great Britain, that by continuous propagation from the tubers for many years, without recurring to the natural seed of the plant, it has lost much of its vigor and vital power. A late number of the Journal of the Royal Agricultural Society of England has a valuable paper, written by a Russian, on this subject, whose name we do not remember. The 'Dry Gangrene,' or a disease which may be designated by some other name, has affected for several years, the potato crop of Great Britain, Germany, Russia and Sweden. In each of these countries, and on the Hudson river in this State, and we know not how many other places, new seedlings have been propagated, which are said to be much superior to any old roots.

"The potato crop of the State of New York alone exceeds 30,000,000 bushels a year. We have the authority of Mr. Coleman for saying that in some parts of Germany they now contrive to raise 4,000 bushels potatoes on five acres of land, or 800 bushels per acre."

CURE FOR THE BITE OF A SPIDER.--We yesterday published a case of death, (says the Baltimore Sun,) resulting from the bite of a spider, which has induced a correspondent to send us a cure for similar cases. He says that the leaves of green plantain, mashed and applied to the wound, and the free drinking of strong tea made of the same herb, is an infallible and speedy remedy.

For the Southern Cultivator.

MR. EDITOR—I was much pleased with the suggestions of Liebig, jr., in a late number of the Southern Cultivator, on the subject of legislative aid to agriculture, by the establishment of a State Agricultural Society, and also a Professorship of Agricultural Chemistry, at the State University at Athens. The benefit and advantage other States have derived from legislative assistance, are incalculable, and will be felt and acknowledged by future generations. It will give a stimulus and energy to agriculture that will add to the wealth and resources of the State.

The reason that agricultural schools have so generally failed is, that they were not conducted on scientific principles. Physical labor, without science, becomes irksome to a young and active mind: so soon, however, as the mind becomes engaged and interested, the fatigue of the body will be unheeded. The plowshare opens to the view of the scientific farmer the richest treasures of geology and mineralogy. It is a cabinet that is inexhaustible and ever varying. And when chemistry unfolds the arcana of nature, and shows the different kinds of soils adapted to the production of each and every variety of vegetation, then agriculture becomes a science and the mind directs the physical labor to the greatest usefulness and advantage.

It is, then, the duty and the interest of the State, to place within the reach of her citizens the means of becoming scientific farmers. By establishing a Professorship of Agricultural Chemistry at her University, the young men then leaving the institution and returning home, would spread throughout the State, a science that would do more good to the community than all the Latin and Greek that could be crammed into their heads.

The true policy of the State requires the serious attention of her legislators to the consideration of these subjects. It is hoped, by one farmer, that the next legislature will make the necessary appropriations to carry into effect both the suggestions herein mentioned. PHILOS.

☞The first saw-mill in New England, and probably the first in this country, was built at Agamentico, (now York,) in Maine.

Corns.—One thickness of flannel confined over the corn, anointed twice a day with spirits of turpentine, will effect a cure. This is an important *discovery*. Wonder if the editor of the Connecticut Farmer's Gazette ever effected a cure with it: if he has not, he had better try it himself, before he recommends it to others.

From the Boston Cultivator.

MENDING A TREE.

We saw at Isaac Frost's, Newton, a tolerably large apple tree that had the bark eaten all around by the mice, some years ago, and of course would have died without some extra pains to save ti. Mr. Frost set about a dozen scions in the tree, one end in the green bark and wood below, and the other above the wound. They all took at both ends and grew well, excepting one which took only at the bottom and, is forming a little tree by itself The scions are now about two inches in diameter, and are touching each other. The tree is in a fine condition. This method of mending a tree is attended with some trouble, but by this simple means, which can be done in a few hours, a valuable tree may be saved, as has occasionally been the case.

Making Jelly.—Those who would make fine jelly, should always avoid boiling the juice of the fruit, when it is desirable to have the article, when made, retain the flavor of the fruit from which it was prepared. After the juice is pressed from the fruit, and the proper quantity of sugar added to it, let it be heated until the sugar is dissolved: after this is effected, no further heat is required.

A Curious Fact.- The following is the contents of a hawk's nest on a large pine tree, nearly one hundred feet from the ground, on the farm of Liberty Partridge, in Westminster, Mass. One black snake, 3½ feet in length; two large adders; two green snakes; one striped racer snake; five striped snakes; six chickens; five sparrows; one striped squirrel; two mice; one toad; one frog; two young hawks nearly half grown.

Agriculture.—What profession is more honorable, and more useful, than that of the tiller of the soil? The wisest men of the age have proclaimed farming one of the most humble, honorable and useful employments, that Providence has bestowed upon man—that is, scientific farming; for, a farmer without any knowledge of science, is not capable of cultivating an acre of land. Some farmers are too independent to get along well. I have actually seen farmers, (but not fit to be called farmers,) who would not only refuse to pay one or two dollars a year for an agricultural paper, but would expose their ignorance so far as to denounce them as containing nothing but falsehoods, manufactured by the editors, and their aristocratic correspondents, who pretend to be farmers, whose dishonest designs are merely to swindle the poor farmers out of a dollar or two, by their filthy papers. Such *farmers* as these ought to plow a hole deep enough to hide themselves, and be ashamed ever to be seen again on a farm.—J. J.

Leicester and Southdown Sheep.—The best breeders in England are now crossing these two breeds of sheep; but in general they do not breed from the cross. They keep the breeds pure, and kill the cross-bred stock. This is when raising for the butcher. A mixture of the Southdown does not make the Leicesters or Bakewells so fat as they are alone.

Plaster on Fruit Blossoms.—This will make them productive, when otherwise barren.

Solution of Lime.—This is destructive to slugs.

Tornado in Effingham County.—We understand that a destructive tornado passed over the upper part of Effingham county on Tuesday morning. The dwelling house of Mr. Hinely, near the Louisville road, together with all the out-buildings, except the kitchen, were blown down, and partitions of the window curtains of the house found at the distance of half a mile. Fortunately no person was injured. We did not learn the extent of the damage, but are informed that it was considerable.—*Sav. Republican.*

☞ We learn from a gentleman who left Fort Leaven on the 10th of last month, that preparations were then in progress among a body of about five hundred U. S. dragoons, to march Westward under the command of Major Clifton Wharton. The objects of the expedition are to endeavor to make peace between certain Indian tribes that have been a long time at war, to hold Councils with various tribes along the route, and to impress them with the necessity of preserving peace among each other. Also by the display of a considerable and well appointed force, to convince them of the ability of the United States to punish them for any aggressions committed upon our citizens, while in the Indian country. An artist is to accompany the expedition, to take sketches of the Indian Councils, games, &c. We also learn that the Dragoons are in fine condition, and fully prepared to act with efficiency. Major W. is one of the ablest officers of the army, and has been in command at Fort L. for some time.—*Phil. Inq.*

From the West.—The American Fur Company's boat Nimrod arrived here yesterday from Council Bluffs. She brings no news of much interest. The steamer Frolic was heard from, eight days ago, about 350 miles above the Bluffs, pursuing her way safely onwards to the Yellow Stone. A large number of the Company's men had deserted, or refused to do duty, and an express was brought down by the Nimrod for recruits. The Missouri river is becoming very low, and the sand bars and snags form considerable obstacles to navigation.—*St. Louis Rep., 29th ult.*

Terrible Explosion.—Our citizens were startled from their slumbers last night, about 12 o'clock, by a terrible noise, shaking of dwellings and rattling of windows, caused by an explosion of about 20 or 2200 lbs. of powder in one of the cylinder mills of the powder manufactory of the Messrs. Austins, about a mile from this village, demolishing the building and machinery and scattering portions of it for half a mile about. There was about 600 lbs. of copper balls in the mill, which are probably thrown to a considerable distance, but we have not learned that they have done any injury. We are happy to say that no lives were lost and no person injured. The cause of the explosion is unknown. The machinery was in operation at the time, but no one was in or about the mill. Loss $1,000. The accident will not prevent the supply of powder as usual.—*Akron (Ohio) Beacon.*

Astonishing effect of Electricity in curing hysterical lockjaw.—The following account of the efficacy of this astonishing remedy we should do wrong in withholding, though it should never again prove effective. We have the account from some friends, who chanced to be present, and saw the patient eating the first meal she had taken in five days a few minutes after the spasm had ceased. She had been previously nourished by drawing milk through the apertures of the closed teeth, through which the edge of a knife could be passed with the greatest difficulty. The young woman was thus affected in consequence of exposure to cold and fatigue and was completely recovered by the electro-galvanic apparatus applied to both angles of the jaw. The machine had not made forty revolutions, when the jaw opened to its full and natural width. We learn that it has been successfully applied for nervous diseases of the eye; also in a case of poisoning by laudanum, where two entire ounces had been swallowed. In this case the patient was revived by the machine, and collapsed alternately during five hours, the intervals becoming shorter till speech was re-established. Curvature of the spine has also yielded to its powers. Indeed, its proper application is as varied as diseases of general debility and irregular action.—*Journal of Commerce.*

CONTENTS OF THIS NUMBER.

Communications.

Preparing Cotton for Market....145
A Short Chapter of Experience....145
Smut in Wheat....146

Selections, Extracts, &c.

The Farmer's Ode....145
Organic Improvement of Domestic Animals....146, 147
Experiments with Marl....147
Agricultural Society of South Carolina....147
Irrigation....147, 148
Improvement....148
New York Agricultural Institute....148
Spirit of the Agricultural Journals....149
Reclaiming Wet Lands....149
Wool Growing in Alabama....149
Work for September....150
Horn Distemper or Hollow Horn....150
Editorials, etc....151
Corns; Mending a Tree; Making Jelly, A Curious Fact; Leicester and Southdown Sheep; Astonishing Effect of Electricity in Curing Hysterical Lockjaw....152

BACON'S LARD LAMPS.—A new article, superior to all others for this purpose, emitting a good clear light without smell or smoke, and at an expense, counting Lard at 8 cents a pound, of about a quarter of a cent an hour.

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SOUTHERN CULTIVATOR.

VOL. II. AUGUSTA, GA., OCTOBER 2, 1844. No. 20.

ORIGINAL COMMUNICATIONS.

For the Southern Cultivator.

A HINT TO SEEDSMEN.

MR. EDITOR—The writer has been for several years in the habit of buying more or less garden seed, and frequently after taking much pains in preparing the ground, has been mortified at having no plants. The reason is plain: the seed were *over age*, and did not germinate. I propose, as a remedy, that friend Landreth, and other horticulturists, who prepare seed for market, be required, yes, *required*, on pain of forfeiting their customers, to mark the year in which the seed are grown upon their labels, in the place of "warranted fresh." Then, by a little attention to the time or age of vitality in seeds, (vide table, 2d vol. S. Cultivator, page 2,) the gardener might be saved the disappointment of the loss of time, seasons, labor, &c., saying nothing about the cost of seed. *Will dealers in seed* look to this matter a little? They might thereby do the country great service.

PUMPKINS.—This year I raised a very fine crop of pumpkins on a piece of poor corn land, (which had been improved a little before,) laid off for corn about 3½ by 4½ feet, and planted about the middle of April, in every ninth hill—i. e., every third hill in every third row, without any corn: about one peck of compost manure was used to the hill, well dug and mixed in and about the hill; old cotton seed were used in a few rows without any perceptible difference. The ground was, of course, worked mainly in view of the corn crop, but the yield was very handsome, though I cannot tell the precise quantity, as they have been fed liberally to my stock for several weeks past, (since the squash vines failed,) leaving them still very thick in the field. The injury to the corn crop could not be more than the hills not planted. This plan succeeds much better for me than the one in the Southern Cultivator, (vol. 1, page 5,) which I partially tried last year.

SEED CORN.—This is the time to select your seed-corn. Go into your best corn-field, select the largest ears from the most prolific stalks, and when well dried put the ears by till planting time.

ROTATION OF CROPS.—I have read a great deal about proper rotation, &c., and would like to see something more specific on the subject. I would be thankful, if some of your experienced correspondents would give their views, founded on experience, as to the best course of rotation for a man who does not make cotton, and works level land, poor enough and rather sandy. How would corn, peas and wheat, or oats do? and how should they follow each other—and the reason why?

ARTICHOKES AND PEAS.—Has any one tried these together? I think they would make a hog-pasture of the richest character, and do but little hurt to each other. The artichoke should girt every plantation by filling every corner of the fence, keeping out briars and bushes: thus planted, they will pay well for their room—they also present a handsome bordering for a field or plantation.

Yours, &c., GREENE B. HAYGOOD.

Casulon, Clarke county, Sept. 27, 1844.

For the Southern Cultivator.

MR. EDITOR—In the 16th No. of the Cultivator, I am glad to see that "Franklin" has again resumed the subject of "Overseers." I have not the pleasure of being acquainted with Franklin, but I am certain that he has handled that very interesting subject in a masterly manner, and in a manner which does not only reflect on him the honor of much practical skill in the art of husbandry—but, at the same time, such communications add intrinsic value to agricultural papers, which will be seen and appreciated by the wise and virtuous.

I agree with Franklin, who says: "My idea of a fine crop is first an increase of negroes," meaning a natural increase, as may be proved by his third interrogatory to an overseer. It is a remark made by travellers, both foreign and domestic, and has now a place in the records of our history, that the people of the Southern portion of the U. States are characterized by "liberality, kindness and hospitality." These are encomiums of no ordinary grade, bestowed upon us as a people, not by fawning sycophants, but by historians and philosophers, and whose jealousy of us has ever circumscribed such expressions in our favor to the narrowest possible limits. And while I endorse with pleasure the sentiments of "Franklin," I would urge the propriety for us, as a people, to continue to merit such laudations by universal benevolence, as well to our slaves as the "stranger within thy gates." It has recently been declared, by one of our Southern patriots, that "the slaves in the Southern States are the happiest peasantry on earth;" and, with such a system of management as that taught by Franklin, the above declaration will never suffer refutation.

Franklin propounds ten or twelve questions to an overseer applying for employment, the first of which is, "Will you obey orders implicitly, fully," &c. This question pre-supposes the proprietor is himself a practical planter; and here, perhaps, some would urge an objection, by stating that many persons own plantations who know nothing about planting: but here I take the liberty to say to all such as are unfortunate enough to own a plantation of negroes and land, destitute of a common knowledge of planting, either part with the property, or serve an apprenticeship by acting in the capacity of your own overseer. I also endorse the proposition of Franklin, when he says, "I appeal to the experience of all planters: during the recent hard times, has any single planter been brought to the block, (meaning his property,) unless for the security of debt, who made all or nearly all his articles of consumption within himself, though he made ever so small crops of cotton?" If agriculturists, throughout the whole country, would be governed by the maxim, "buy little and sell much," we should all do better; cold, hunger, hard times and tariff, would cease to annoy us.

D. B.

Houston county, Ga.

For the Southern Cultivator.

MR. EDITOR—The market for the present crop of cotton is now about to commence, and the price will mainly depend upon the quantity produced. Could the manufacturers know with certainty what will be near about the amount of bales produced in the United States, prices in our markets would be fair and remunerating, all things being considered. But while the buyer and manufacturer depend upon the vague and oftentimes spurious reports of A. B. and C., prices will be unstable—one day too high, and the next too low; first, to the serious injury of the planter, and in turn to the buyer. It appears to me that all these evils are within the reach of a remedy, and nothing could be more desirable, for uncertainty is a baneful check upon all kinds of business operations. The cotton planter, in conscience, asks no more from the buyer than fair and remunerating prices, and this is what the buyer is willing to give: but each party having made his calculation upon the probable amount of production, based upon wild and incorrect stories of partial travellers (being bad judges too) through the country, both parties are honestly deceived, and one or the other made to suffer loss. The remedy I would beg leave to propose, is to be found through your agricultural journal co-operating with all others within the cotton growing States, after the following manner:—In the first place, let the President of each Agricultural Society in each county in the State, and in all the cotton growing States, submit to the papers for publication, a report of the prospect and condition of the crop, with the probable number of bales likely to be produced. Counties destitute of regular organized Societies, can send their reports by the most intelligent subscribers to the paper. These reports, coming from the most intelligent planters of every county, could be relied on for veracity, and be condensed in a tabular form, and compared with the last year's production—each party, then, both planter and buyer, will be furnished with almost absolute data on which to act. By this means prices will be more firm, and security afforded against losses to both parties.

The cotton crop in Houston county, where I reside, was very likely until the last of August; heavy rains, and some remarkable cool days and nights, with a heavy wind, have altered the appearance very materially—and I venture the assertion that the present crop will fall short, in this county, of the crop of last year, from one-third to one-fourth.

D. B.

Houston county, Ga.

SELECTIONS, EXTRACTS, &c.

EXTRACT FROM COLEMAN'S AGRICULTURAL REPORT.

In all parts of the country, women are more or less employed on the farms, and in some parts in large numbers. I have frequently counted thirty, fifty, and many more, in a field at a time, both in hoeing turneps and in harvesting. I have found them, likewise, engaged in various other services—in pulling weeds, in picking stones, in unloading and treading grain, in threshing machines, in digging potatoes, in pulling and topping turneps, in tending cattle, in loading out dung, and in carrying limestone and coal. Indeed, there is hardly any menial service to which they are not accustomed; and all notions of their sex seem out of the question whenever their labor is wanted or can be applied. The wages of women are commonly six-pence and eight-pence, and they seldom exceed ten-pence a day, excepting in harvest, when they are as high as a shilling. The hours of labor for the men are usually from six o'clock, a. m., to six, p. m., with an interval of an hour for breakfast and an hour for dinner. The women rarely come before 8 o'clock, and quit labor at 6, with the usual indulgence for dinner. Many of the laborers walk two and three miles to their work, and return at night. Their meals are taken in the fields, and in the most simple form. The dinner is often nothing more than bread.

In the season of harvest, immense numbers of Irish come over to assist in the labor, and this presents almost the only opportunity which they have, in the course of the year, of earning a little money to pay the rent of their cabins and potato patches. Nothing can exceed the destitution and squalidness in which they are seen—starved, ragged and dirty, beyond all description, with the tatters hanging about them like a few remaining feathers upon a plucked goose. At their first coming they are comparatively feeble and inefficient; but, after a week's comfortable feeding, they recover strength, increasing some pounds in weight, and, if they are allowed to perform their work by the piece, they accomplish a great deal.

I found, in one case, on two farms—which, though under two tenants, might be considered as a joint concern—more than four hundred laborers employed during the harvests, a large proportion of whom were women, but not exclusively Irish. The average wages paid the men in this case was one shilling sterling (or twenty-four cents) per day, and their food, which was estimated at about nine-pence (18 cents) per day. Their living consisted of oatmeal-porridge and a small quantity of sour milk or butter-milk for breakfast; a pound of wheaten bread, and a pint and a half of beer, at dinner; and at night, a supper resembling the breakfast, or two-pence in money in lieu of it. I was curious to know how so many people were lodged at night. In some cases they threw themselves down under the stacks, or upon some straw in the sheds, or out-buildings of the farm: but in the case to which I refer above, I was shown into the cattle-stalls and stables, the floors of which were littered with straw; and here the men's coats and the women's caps and bonnets upon the walls, indicated that it was occupied by both parties promiscuously. This was indeed the fact. Each person, as far as possible, was supplied with a blanket, and these were the whole support. I am unwilling to make any comments upon such facts as these. They speak for themselves: they are matters of general custom, and seem to excite no attention. I do not refer to them as matter of reproach to the employers, who were persons of respectable character and condition, and whose families were distinguished for their refinement. But it presents one among many instances in which habit and custom reconcile us to many things which would otherwise offend us; and lead us to view some practices, utterly unjustifiable in themselves, with a degree of complacency or indifference; and as unalterable, because they have been so long established. I believe there is only one part of the United States where anything resembling such a condition of things prevails, or would be permitted; and there only among a class of beings whose claims to humanity seem not very well established in all minds, and whose degradation, on account of their complexion, appears absolutely hopeless. But, even here, this indiscriminate consorting is not common; nor would it be permitted by any respectable planter.

This condition of things should certainly save this country from the reproach, if it be one, which some English tourists are disposed to attribute to American manners, that of treating the sex with too much courtesy and deference. I cannot bring myself, however, to view the subject with any lightness whatever. My confident conviction is that the virtue of a community depends on nothing more than on the character of the women. In proportion as they are improved, and treated with deference on account of their sex, women are brought to respect themselves, and the character of the men is directly improved: character itself becomes valuable to both parties. But in proportion as the condition of women is degraded, and they are considered and treated as mere animals, self-respect is not known among them, character is of no value, and the moral condition of such a class, or rather its improvement, is absolutely without a hope. Nor is it without its pernicious influences, which must be too obvious to require to be pointed out, upon the classes in the community above them. Much fault as some persons have been pleased to find with the deference paid to the sex in the United States, I should be very sorry to see it in the smallest measure abated. I do not believe, taken as a whole, there is a more virtuous population upon earth, than are the women of New England and the middle States; and nowhere is there a greater decency and propriety of conversation and manners. I speak of these portions of the country in particular, because with them I am intimately acquainted, and have a right to speak with confidence; but I have no reason to say that the same respectability of character does not prevail in other parts of the United States.

I do not claim for my country anything like an immaculate condition of society; very far from it: but I do claim for them a highly improved moral condition, and have no hesitation in saying, that in most of our country villages prostitution is unknown, and an illegitimate child is a comparatively rare occurrence. I add, with equal confidence, that under the influence of our free schools and universal education, and the disinterested and philanthropic exertions among all sects, for the religious education of the young in Sunday schools, the beneficial and ameliorating results fully equal every reasonable expectation. This comes of the value of character, and the lessons early inculcated upon them to respect themselves as women. I would, if possible, strengthen this sentiment; and therefore would, in no department of life, render less prominent the distinctive barriers between the sexes. In all my intercourse with society in the United States, and with opportunities as large as any man of observing all classes among them in the various conditions of life, I have never known an instance of a woman going to a public bar for drink, or sitting down in a public bar-room with men, or alone, to regale herself. The ale-houses and gin-shops in England are as much accustomed by women as by men, and the results of such practices are exactly what might be expected—an extreme vulgarity of manners, and a large amount of drunkenness among the lower class of women. What, as a matter of course, comes with it, need not be told; but the records of the police courts leave no one at a loss.

My observation in this case must be understood as applying solely to the lowest class; these constitute a very numerous portion. They apply, likewise, mainly to cities and large towns. In respect to the deportment of the middle and the highest class—with whom my intercourse, through their kindness, has been familiar and extensive—nothing in manners or conversation can be further removed from that which is vulgar or offensive; and for propriety and highest degree of refinement, nothing can be more exemplary and delightful.

In districts strictly agricultural, the low rate of wages does not admit of much expenditure in this way; and, if there are indulgences, they must be at home in the village ale-houses, and only occasional. For a considerable portion of the year, the farm laborers are not allowed any beer in the haying and harvesting: their allowance seldom exceeds one and a half pint, which, as it is small beer, cannot be considered excessive. I could not learn that any allowance of whiskey or spirit is ever given them by their employers, or that it is ever carried by them into the fields. The drinking, in this country, with the lower and laboring classes of people, seems, in a great degree, confined to the licensed houses, of which, certainly, there is nowhere any want.

In passing through the village of Glossop, in Derbyshire, a modern and an exceedingly well-built village, in a distance, I should judge, of less than three-fourths of a mile, I counted, as I passed along on the box of a coach, thirty-five licensed retail shops, most of which were probably for the sale, among other things, of intoxicating liquors. Indeed, the number of licensed retailers in every village in England is quite remarkable, and would seem, in many cases, to include almost every fourth house.

I am not disposed to object to the employment of women in some kinds of agricultural labor. The employment of them in indiscriminate labor is liable to the most serious objections. Nothing can be more animating, and, in its way, more beautiful, than on a fine clear day, when the golden and wavering harvest is ready for the sickle, to see, as I have several times seen, a party of more than a hundred women and girls entering the field, cutting the grain, or binding it up after the reapers. In cultivating turneps they are likewise extremely expert. In tedding and making hay, and in various other agricultural labors, they carry their end of the yoke even; but in loading out dung, and especially, as I have seen them, in carrying broken limestone in baskets on their heads, to be put into the kilns, and in bearing heavy loads of coal from the pits, I have felt that their strength was unnaturally taxed, and that, at least in these cases, they were quite out of "woman's sphere." I confess, likewise, that my gallantry has often been severely tried when I have seen them at the inns acting as hostlers, bringing out the horses and assisting in changing the coach team, while the coachmen went into the inn to try the strength of the ale.

As far as health is concerned, the outdoor employment of women is altogether favorable. As far as virtue or moral purity is concerned, outdoor employment in itself is not more objectionable than employment within doors. Indeed, from the inquiries which have been made into this matter, and the elaborate reports that have been given to the government, it does not appear that the agricultural districts, where the custom of out-door employment for women prevails, are more immoral than the manufacturing districts. But the natural effect of such employment upon women is to render them negligent of their persons, and squalid and dirty in their appearance; and with this neglect, of person, they cease to be treated with any deference by the other sex, and lose all respect for themselves, and then follow the invariable concomitants, mental and moral impurity, and degradation.

The working, likewise, promiscuously with men, which is done continually, must expose them to rude jests, and to language and manners which, among the lower class of men, are too often grossly indecent and immoral. In all other respects, many kinds of outdoor agricultural employment must be and is, as it is admitted, favorable to health and vigor. The general health and vigor of such women, so many hours engaged in reasonable exercise

in the open air, contrasts most favorably with the effeminacy, debility, and early decay of those who are confined in heated and close manufactories, or in sedentary employments within doors. Nor in point of moral conduct, as far as mere occupation is concerned, is there any reason to suppose that the agricultural classes would suffer in comparison with the manufacturing classes, or with the host of young women in cities, employed in various trades and in-door occupations. We have few instances, in the free States, of women being employed in field labor. The women in Wethersfield, Connecticut, have for years been accustomed to the cultivation of onions, doing everything for the crop, excepting plowing and manuring the land, even to preparing it for the market. They certainly have suffered no evil, but the contrary. Can men, dependent upon their own exertions for support, find wives better able to manage their household affairs, more frugal, more industrious, than the young women of Wethersfield? It must seem strange to many persons, if I also add, as I know I may with truth, that many of these young women are persons of good education, and to a degree, allowing for the retired condition of society in which they have been brought up, even of refined manners: so totally different, indeed, are the conditions of the laboring classes in England and the United States. In truth, no comparison can properly be instituted between them. In general, among the laboring classes in England, their low condition, their ignorance, and want of education, and the almost absolute impossibility of raising above the estate in which they are born, render them, to a great degree, reckless and improvident. Character becomes consequently of far less importance than it would otherwise be. There are wanting, consequently, the motives to that self-respect, which constitutes the highest security of virtue; and, under such a condition of things, it is not surprising to find a laxity of morals, which produces swarms of illegitimate children. This is attended by the usual consequence—an absence, on the part of the parents, of that sense of obligation to support and provide for their offspring, which is to be found in its purity and strength only in legal wedlock.

From the Plow Boy.

INDIVIDUALITY.

Friends, can you fail to notice, day by day, the great difference there exists between us members of the human family? Do you not observe the analogy, that as there are no two leaves precisely alike on the same tree, so there are no two individuals precisely alike in our common stock? We cannot account for this truth, but it is evident to all our senses. It seems surprising, then, that our fellow creatures, with this truth before them, should act in any other way toward each other than that of charity.

To illustrate it, let us take a plow for example, an implement which has called forth the genius of so many to improve. It is surprising what a number have been patented, and how frequently other new ones appear. If you go into Massachusetts, you will probably find them using a plow different in some particular to any you have ever seen before, and if you see the inventor of it, he will endeavor to show you the superiority of his plow over any other; but you go elsewhere and see other kinds of plows, whose inventors will each tell you that their plows are superior to any other. Which would you take among so many? Would you not get perplexed, and wish you had not seen them? or would you not have rather to consider the form and quality of the land you possessed, and judge for yourself which plow would best answer your purpose? Your decision proves your individuality. Each man knows best what will suit him; therefore, his plow to him is better than any other plow.

A man has invented a machine for brick-making, and from some of those who have adopted it, we are led to suppose that it is much superior to the old way, for that it performs much more and much better work. But other parties who have tried it, say that it is quite a failure, for altogether the machine is far more expensive than the old way, and produces very inferior work. Who is to decide, when one man tells you it is right, and another tells you it is wrong? Why, our own reason and judgment must reign paramount. We must use our individuality and decide for ourselves, because what may suit one man may not suit another.

So it is with diet; as the old saying goes, "what is one man's food is another man's poison." How common it is to hear persons say they could not live without tea and coffee, because, perhaps, they never tried to live without it. Those in the habit of drinking whiskey have said the same thing, yet the coffee drinker (not comprehending man's individuality or natural difference) condemns the whiskey drinker because he does not leave off his whiskey and live upon tea and coffee. Some persons, again, eat a great deal of meat, and say they could not exist without it—they should lose all their strength and not be able to perform their daily toil; without, at the same time, knowing that there are millions of human beings who have to perform their daily toil without ever tasting a bit of animal food, and such individuals no doubt would say that they could not exist if they gave up their vegetable diet and had to live on animal food.

Again—we must decide for ourselves which is best for us, by using our reason, and not condemn a man and call him a fool for destroying his constitution, because he drinks nothing but the pure water from the crystal spring.

Always bear this beautiful guiding principle foremost in your mind—THAT YOU MAY BE WRONG; but also exercise the reason God has given you to ascertain what is right or wrong for yourself.

Suppose you see your neighbor plowing his fields and planting his corn in some way different from you: he may, for instance, be trying some new mode which he has learned through studying an agricultural paper, or by his reasoning ascertained some facts in relation to the soil. Pray, then, throw aside the narrow prejudice and the short-sighted feeling which would pour forth its notes in ridicule. Wait patiently till you see the result, and if it proves successful, why you are, in common with many more, much benefitted thereby; and, if it should turn out a failure, you are likewise benefitted, for you feel the more satisfied that your own course is the best to pursue, and you are indebted to the individual who ventured beyond the common path for the sake of an investigation which might have benefitted all mankind.

Remember public opinion, which is the great governing power in our land, is not always right, for very often the brave spirits who step aside or beyond it, are those to whom we are indebted for some of the greatest blessings we now enjoy. If we were always to abide by public opinion, we should still continue plodding to the old church, on the old road, and putting our corn-meal across our horse's back with a lot of stones on the other side to balance it. But this will not do: if we want to progress, we must use our own intellects. We must examine all things and hold fast that which we consider good, without regard to the ignorant prejudices of (unfortunately) too many of our brethren. Bear in mind that it is not alone for self that we attain a new eminence, but for all those who choose to follow in our footsteps. But if we allow ourselves to be bound by public opinion to do as our fathers have done before us, we shall indeed have mill-stones round our necks, going on, or rather standing still, with our rude log cabins and our corn bread and pork. "Well," some of you may say, (to prove your difference of opinion,) "we are very well contented with all that." "So be it," I would answer, you enjoy that; but we will endeavor to go a little further, by using all our energies to build a better house wherein we can be free from many troublesome insects which we now have, and where we can enjoy a little more health and comfort. We would plant some fruit trees around our house, make us a tidy garden for domestic vegetables, adorned a little with some sweet-scented flowers to add a little more to our happiness; but our principal attention would be devoted to our fields, endeavoring to remedy deficiencies in the soil by applying the requisite manures and so on. If you differ from us, why well and good; you may go on in your old path and enjoy your corn and pork in contentment—though we cannot leave you this time, without saying a few words more to remind you of the prejudices which mankind, and especially those in power, have had to anything new or anything differing from the present. Remember Galileo who, for proving that the earth went round the sun, stood in such danger of his life. remember the prejudice and opposition Fulton had to contend with before he astonished the world by the power of steam: remember, also, the opposition manifested at the Revolution, as to the practicability of a republican government. Yet, every day the more demonstrates its glorious advance.

If you please, use your reason on our short essay and decide for yourself. Though we are so different, there is no doubt but it is for a good purpose, and that we are naturally so, we ought ever to bear in mind throughout all our wordly dealings.

A very celebrated writer said he fully and conscientiously believed that it was the will of the Almighty that there should be diversity of opinions among us, as it affords a larger field for our Christian kindness.

From the New Genesee Farmer.

COMFREY.

Prickly Comfrey.—[*Symphytum officinale.*] *If all is true* that has of late been published respecting this plant, it promises to become a very important acquisition to our agricultural products, not only as food for cattle, but for man. It was first noticed as an agricultural plant in Loudon's Gardener's Magazine, in 1830, by D. Grant, of Lewisham; where it was tried by a number of cultivators. Cattle of every kind are said to be fond of it: and Mr. Grant thinks an acre might be made to produce thirty tons of green fodder in one year. The plant is of easy propagation by seeds or roots; it is also of great durability, and if once established, would probably continue to produce crops for many years; and in that point of view, it would seem to be a valuable plant for the cottager who keeps a cow. In the spring of last year, there appeared in the Keene Sentinel a letter from the Rev. E. Rich, of Troy, New Hampshire, recommending the cultivation of comfrey for its foliage as fodder for stock, and for its roots as an article of diet for man. He observes, "it will probably yet prove one of the best and cheapest articles of healthful diet now known; not outdone by the potato or Indian corn!" He then details some experiments in the preparation and use of the roots as food, by drying and grinding, then boiling as porridge, &c.; and says he found it very beneficial for colds and other diseases of the lungs and bowels. He advises mixing one-third of comfrey meal with wheat or Indian, for porridge, puddings, griddle-cakes, &c. Should the taste, at first, be in any degree unpleasant as is often the case with new things, any agreeable condiments can be added. The letter further states, that the roots are to be dug once in two years, and that they will yield at the rate of more than two thousand bushels per acre; (!) and the two cuttings of the tops in one season, gave at the rate of six tons of hay per acre.

In an article on this subject in the Portsmouth Journal, last November, the editor, after alluding to the letter of Mr. Rich, states that Mr. A. Robinson, of that town, planted a bed of comfrey in his garden, last spring, half a rod square, the plants set in rows fifteen inches distant. They scarcely started till July, and the season was very dry; but on cutting the plants in September, the product, when dried, was 22½ pounds. He has no doubt but that next season, when the roots become well set, the bed will yield, at least, two cuttings of twenty-five pounds each; or at the rate of about 8 tons per acre. Mr

Robinson says his stock of all descriptions eat it freely; and he thinks this plant will prove a valuable acquisition to our agriculture.

Comfrey is called a native of Siberia, but it may be regarded as indigenous to this country. It belongs to the order *Boraginæ*, which consists of plants not remarkable for useful or nutritious qualities.

The plants can be found in almost every neighborhood, and it will be an easy matter to try experiments with it.

SOUTH CAROLINA STATE AGRICULTURAL SOCIETY.

GREENVILLE C. H., Sept. 10, 1844.

The State Agricultural Society met at Greenville, as ordered by the meeting in December last. The President called the meeting to order, when the delegates and members enrolled themselves.

The Society being now organized, Col. R. F. W. Allston introduced the following resolution:

"That the resolution passed in November, 1840, requiring the payment of an 'entrance fee' on the part of competitors for the Premiums of the Society, not being members, be, and the same is hereby annulled; and that the Premiums of this Society shall hereafter be held open to the present competition."

This motion was discussed by Mr. Allston, Col. Brooks, Dr. Gibbes, Mr. McBee, and Gen. Thompson, and was finally adopted, with the following amendment, proposed by General Thompson:

"That the Premiums of the Society shall be free to all members, either of the State or Local Societies—all others shall pay one dollar for the privilege of competing for said Premiums."

Mr. Roper then introduced the following resolutions:

Resolved, That a combined system of Agriculture, Manufactures and Commerce, are essential in promoting the prosperity and happiness of a community.

Resolved, That the large extent of country opened and preparing for the culture of cotton, in the Western and Southern States, and the superior adaptation of the soil to that culture, and other motives, render it important for the farmers of South Carolina to resort to a more varied means of promoting their individual and the general welfare.

Resolved, That, to accomplish this purpose, we recommend a system of household manufactures in every article where domestic skill can be made available. We recommend the raising of our own flour, bacon and stock, with an abundant grain, root, and hay crop, for the purpose of sustaining them, together with provisions and supplies of all kinds.

Resolved, That a scientific mode of culture, with the application of manures, which in all civilized countries have become objects of national direction, will greatly advance our prosperity: and that a memorial be sent from this Society to the Legislature, praying a continuance of the system of Agricultural and Geological Survey, till the whole State be scientifically explored, and the domestic resources of the country fully developed. And further, we recommend to all farmers the advantage of consulting the Agricultural and Geological Surveyor as to the nature of their soils, and best means of increasing their fertility and adaptation to raising a greater variety of products, than are at present cultivated.

These resolutions were discussed by Mr. Roper, Gen. Thompson, Dr. Gibbes, Hon. J. R. Poinsett and Major Perry, and adopted; and the following Committee appointed to petition the Legislature accordingly, viz: R. W. Roper, Dr. Gibbes, and V. McBee.

[Col. Allston then introduced resolutions proposing some alterations of the Constitution of the Society, which were adopted, but for the want of room, we omit them. Ed. Mountaineer.]

On motion, it was agreed the Exhibition should take place at 10 o'clock on to-morrow, and the Oration at 1 o'clock.

The following are appointed as the Committees to make the awards:—

On Horses.—O. B. Irvine of Greenville, R. F. W. Allston of All Saints, E. C. Leitner of Spartanburg, Paul Hamilton of Pendleton, A. G. Verdier of St. Lukes, B. H. Wilson of All Saints, Isadore Lartigue of St. Peters, Thomas Henderson of Newberry.

On Cattle.—J. R. Poinsett of All Saints, Jas. B. Davis of Columbia, Whitfield Brooks of Edgefield, Wm. Summer of Newberry, G. R McCullough of Abbeville, J. B. O'Neall of Newberry.

On Mules.—R. W. Gibbes of Columbia, Henry Parr of Fairfield, B. Stratham of Greenville, Wm. Walker of Spartanburg, R. W. Roper of Charleston.

On Hogs.—George Seaborn of Pendleton, J. Glenn of Newberry, V. McBee of Greenville, S. M. Earle of Greenville, Geo. Nicholls of Spartanburg, S. M. Wilson of Pendleton.

On Sheep.—B. Dunlam of Greenville, John Rivers of St. Andrews, B. F. Perry of Greenville, Rev. Mr. Potter of Pendleton, Samuel Clark of Edgefield, James A. Black of York, M. Subet of Newberry.

WEDNESDAY, Sept. 11.

The Society met at 10 o'clock, and the meeting being organized by the President, the Secretary read the proceedings of the 10th.

The Hon. J. B. O'Neall introduced the following resolution, which was unanimously adopted:

Resolved, That the President of the State Agricultural Society be requested to present to Mr. Edmund Ruffin, late Agricultural Surveyor of the State, the thanks of this Society, for the able and efficient discharge of his duty.

Col Brooks, of Edgefield, introduced the following:

Resolved, That the Agricultural Societies of Greenville, Pendleton and Spartanburg, be respectfully requested to reply to the following queries at the next meeting of this Society in Columbia, on the 4th Monday in November:

1st. What is the nature and kind of soils in your respective Districts? What are the principal products? What modes of cultivation are in use?

2d. What are the usual rotations of crops in practice? What manures are in use, and in what way applied, whether broadcast, in checks or drill?

3d. What agricultural implements are in general use? What kind are used in seeding small grain—what in the preparation of land, and what in the cultivation of corn and cotton?

4th. What are the favorite breeds of Horses, Cattle, Sheep and Swine—and how is the District supplied with these domestic animals? How are they wintered, and what grasses are used for hay?

5th. What fruits are cultivated, and what is the condition of the Horticulture of the District?

6th. Are there any dairy and grazing farms in the District, where cheese and butter are made for market?

7th. What effect is produced upon the Agriculture of the District by the practice of leasing land upon shares, and what agricultural changes are necessary to advance the prosperity of the District?

8th. Are root crops for stock cultivated? If not, be pleased to state the cause.

9th. State the average annual crops of cotton in each District, and the probable average per acre.

10th. If there be any manufactures in your District, communicate the number and kind, the number of hands employed in each, the quantity of the raw material used in the cotton factories, and especially the profits of each establishment of whatever kind, and such other information as it may be convenient to furnish, or important to the Society.

11th. Is there Marl or Lime in your District? If so, is it used for agricultural purposes, and what is the cost per bushel to the farmer?

These resolutions were advocated by the mover, and agreed to.

Col. R. F. W. Allston's proposed amendments to the Constitution were now called up, separately put, and agreed to by the constitutional majority.

A Silken Flag, manufactured by the Misses Flemming, of Spartanburg, and painted by a native Artist, (Mr. Wm. K. Barclay, of Columbia,) lately presented to the 36th Regiment, was exhibited to the Society.

Two specimens of colored and figured Silk, manufactured by Mrs. Dantzler, of Spartanburg, were exhibited. Mrs. Belcher presented a Straw Bonnet and Hat, made by herself.

On motion of Hon. J. B. O'Neall, it was unanimously agreed that the thanks of this Society be tendered to each of these ladies, for the skill, taste and elegance of their several specimens, and to Mr. Barclay, for his skill as an Artist.

Mrs. Poinsett presented, through the Hon. J. R. Poinsett, to the Society, some baskets of Grapes, grown in her garden; which, on motion, a Committee was nominated, of *venerable bachelors*, consisting of Messrs. Dunham, Stone and Goodlett, to hand around for distribution to the ladies in the gallery, and return thanks to Mrs. Poinsett.

Dr. R. W. Gibbes brought the attention of the Society to a Resolution, adopted some time since by the State Agricultural Society, to sustain an Agricultural paper, proposed to be issued by Mr. Morgan, Publisher of the Temperance Advocate, in Columbia. He stated the necessity of this paper, its remarkable cheapness, and the advantages likely to result from its support.

Mr. Smith, of Laurens, exhibited a Plow, called a *Labor-saving Plow*, and the following Committee were appointed to examine its advantages: Chancellor Johnson, B. Statham, Col. Glenn, W. Brooks and B. Duncan, and the Charman, reported favorably of it.

The Committee having examined minutely all the Stock, which was highly encouraging to the Society, were now ready, and being called upon, reported their awards as follows:

The Committee on Horses beg leave to report, that the exhibition of Horses was highly creditable and gratifying, giving promise of extensive and material improvement in the Stock of this section of the State.

Your Committee award the premium for the best Stallion over five years old, for Saddle purposes, to J T. Whitefield, of Anderson, for his bay horse, by Bertrand, dam Blackburn's Whip, (bred by himself.)

For the best Stallion under 5 years old, to Samuel M. Earle: for his yearling, by Monarch, dam by Nullifier, (bred by himself.)

For the best Mare or Filly under 5 years old, to Gen. Thompson's Chesnut Mare, 4 years old, by John Bascomb, dam by Red Gauntlett, (bred by himself.)

Your Committee particularly recommend Mr. Leverett's Filly, Fanny Elsler, as an animal next to that taking the award.

O. B. IRVINE, Chairman.

The Committee on Cattle, having examined the many fine animals submitted to their inspection, have unanimously agreed to the following awards:

The premium for the best Bull, over 1 year old, to Dr. C. B. Stone, of Greenville, for his Durham, bred by himself. At the same time, the Committee are of opinion a Bull exhibited by Mr. Moore, of Greenville, deserves a favorable notice.

The premium for the best Bull under 1 year old, to Col. E. C. Leitner, of Spartanburg, for a Durham, bred by himself.

For the best Milch Cow, to V. McBee, for a native cow, bred by himself.

For the best Heifer, under 1 year old, to S. M. Earle, for a Durham, bred by Col. Hampton.

J. R. POINSETT, Chairman.

The Committee on Mules, respectfully report, that they have considered the merits of the Mules offered for premiums, and have unani-

mously awarded it to Maj. Elias Earle, jr., of Greenville, for his Mule, 1 year and 4 months old. R. W. GIBBES, Chairman.

The Committee on Hogs, respectfully report, that they have diligently examined a very large number of various breeds of hogs, and most highly creditable to any country.

For the best Boar, over 1 year old, they award to Maj. J. M. A. Turpin, of Greenville, for a Berkshire and Lancashire cross—not without a most favorable notice of a strong competitor in a Berkshire, the property of the Hon. J. R. Poinsett.

For the best Sow, over 1 year old, to Dr. C. B. Stone, of Greenville, for his Berkshire.

For the best Boar, under 1 year old, to Dr. A. B. Crook, of Greenville, for his Berkshire.

For the best Sow, under 1 year old, to Col. D. Hoke, of Greenville, for his Berkshire.

GEO. SEABORN, Chairman.

The Committee on Sheep make the following Report:

They have examined three pens of Sheep, belonging to Dr. Crook, S. M. Earle and Mr. Stone. Whilst they would recommend most favorably all exhibited, they award as follows:

For the best Ram, to Dr. Crook—Bakewell and Southdown, (bred by Col. Hampton.)

For the best Ewe, to S. M. Earle—Bakewell, (bred by Col. Hampton.)

B. DUNHAM, Chairman.

These Reports were severally received, and the President made the distribution.

Hon. J. B. O'Neall was now called upon, and made his Address. And, on motion of General Thompson, the Society returned him thanks for its ability, and requested its publication, which was so agreed.

On motion of the Hon. J. B. O'Neall, Hon. J. R. Poinsett was requested to take the Chair of the President, and Col. Brooks introduced the following resolution.

Resolved, That the thanks of this Society be returned to the President for his ability and impartiality in the discharge of his duties; and to the Secretary, for his diligence in the discharge of his labors.

The President, on resuming the Chair, responded to this compliment with much feeling, and took his seat. The Secretary added, "that he would only say, no occupation in his life afforded him so much pleasure as the discharge of his duties as Secretary."

On motion of Hon. J. B. O'Neall:

Resolved, That the thanks of this Society be tendered to Mr. Smith, for his "Labor-saving Plow," and that it be recommended to the favorable notice of the farmers.

Dr. Gibbes moved that the thanks of the Society be returned to the Methodist Church, for the use of their building.

JAMES B. DAVIS, Rec. Sec.

THE FARMER'S FIRST LESSON IN CHYMISTRY.—A class has been formed at a place down in Hampshire (Punch does not feel called upon to speak more explicitly) for the study of agricultural chymistry. The plan for instruction is catechetical. The following lesson is founded on the responses, as reported to Punch by his own correspondent, delivered at one of its recent meetings. Mistakes, they say, afford often a valuable lesson. If so, it is hoped that the lesson subjoined will be of great value:

"Chymistry is keepun' a doctor's shop. An atom is a mossel o' zummut; a bit o' dust or zand, loike. The weight of an atom is the heft on un. Light is accordun as it med be: daylight, moon-light, or candle-light. Heat is that are as comes out o' the vire."

To the question, "What are the phenomena of heat?" the reply was, "Dooan't 'zactly know what you manes, zur. The effect of heat is, rooastun' mate, bilin' taters; burnin' yer vingers if you gets too close to 't. Lightnin' is a thunderbolt fallin' out o' the clouds; a thunderbolt is a thing like a clinker. An acid is any zort o' zour stuff, like vinegar or varius. An alkali is a foreigneerun' name var zummit or other, may be for a pig. Potash is ashes from under a pot. Soda is stuff as washerwomen uses. Ammonia is one o' them fine names as yer gentlefolks gives their darters. If you puts zulphuric acid to lime, and makes zulphate o' lime, why, of coorse, if you adds it to wuts, (oats) you gets zulphate o' wuts. A zimple body means a zimpleton, like Zilly Billy at the poorus. The laws of chymical union is like the laws of any other Union, pretty strictish, and o' coorse every chymical union has got a beadle. Chymical affinity, attraction, cohesion, composition, decomposition, analysis, synthesis, is a parcel of outlandish gibberish. Justus Liebig is zome Vrenchman."

The foregoing statements, we imagine, exhibit some slight discrepancy with the views of Faraday; but as the agricultural mind expands, its ideas of chymical science will very likely become rather more accurate.—*Punch.*

STEAM PLOWS.—A manufacturer in Cincinnati, has forwarded to St. Louis a plow that is to be driven by steam, for turning up the prairies of Illinois.

WAGES OF FARM LABORERS IN ENGLAND.

The wages (per year) paid in the county of Northumberland, as given by several gentlemen familiar with the subject, to the parliamentary committee, are as follows:

First Example.

36 bushels of oats,
24 " barley,
12 " peas,
3 " wheat,
3 " rye,
36 to 40 bushels potatoes,
A cow's keep for a year,
Cottage and garden,
Coals from the pit,
£4 in cash.

Second Example.

10 bushels of wheat,
30 " oats,
10 " barley,
10 " rye,
10 " peas,
A cow's keep for a year,
800 yards of land for potatoes,
Cottage and garden,
Coal,
£3 10s. in cash,
2 bush. barley in lieu of hens.

Third Example.

36 bushels of oats,
24 " barley,
11 " peas,
6 " wheat,
1000 yards of land for potatoes,
A cow's keep,
House and garden,
Coal,
£5 in cash.

The Scotch laborers seemed to me, from a very limited observation, strongly attached to their employers. On one farm, where I had the pleasure of visiting, one of the laborers had been in the employ of the same family forty years, and another sixty; to each of whom, although their labor now was of little value, the farmer continued the same rate of wages which they had in early life. This, indeed, would seem to be no more than just, that the honest laborer, whose life had been spent in the service of another man, should not be turned adrift in his old age; but, alas! how rare is justice!

The condition of the laborers in this country is a subject of such deep concern to the community, on the ground of pecuniary profit, as well as philanthropy and justice, that I shall again revert to it. The common wages of farm labor, vary for men, from five shillings to twelve shillings per week; but I think a fair average would be eight to nine shillings sterling. A shilling may be reckoned at twenty-four cents, so that the monthly wages for a man may be put down at eight dollars and sixty-four cents. This is the whole, where labor is paid for in money, excepting as a matter of kindness, the farmer generally brings the coals for his laborer. I am not yet able to speak of the condition of things in Scotland, but it is constantly boasted that the education of the Scotch laborer is always provided for, and that, in point of instruction, they are far superior to the English. This remains for me to see.—*Colman's First Report on European Agriculture.*

From the New Genesee Farmer.

WHEAT CULTURE.

Wheatland Farming.

The following article, by our esteemed friend, Wm. Garbutt, of Wheatland, we are sure will be read with interest and profit by many of our readers, and will prove of more value to some than many times the cost of this paper for a year. Mr. Garbutt, as is well known, is one of the oldest and best practical farmers in the purely wheat region of Western New York. His style of writing is peculiarly characteristic, evincing deep thought, as well as great practical experience. He is more used to wielding the plow than the pen, and depends more on his own observation and experience for guidance in his business, than on the theories and speculations of others; although he is not dogmatical, like many possessed of less knowledge, nor is he unwilling to be taught even through the columns of an agricultural paper. On the contrary, he has always been a warm friend of such publications—and, as past volumes of the Genesee Farmer will show, he has ever been willing to communicate the results of his experience, whenever he thought his brother farmers might be benefitted thereby.

The opinions set forth in the following article are entitled to the highest consideration, however widely they may differ from those of other intelligent farmers. Mr. Garbutt makes no claim to infallibility, however, and he does not wish or expect every farmer to adopt his opinions. His object is to elicit experiments and discussion, and induce other farmers to give publicity to their opinions on questions relating to their profession.

We think we discover one or two slight mistakes in his article—particularly in reference to the manufacture of manure; but we pass the matter for the present, in hopes that some other experienced practitioners will send us their views on these subjects. B.

MR. BATEHAM—I am glad to find the discussion of the best method of raising wheat, and the most profitable system of farming, introduced into the Genesee Farmer. The interchange of views and opinions by practical farmers is the surest way to arrive at the truth, and believing it to be the duty of every one to contribute something to the general stock, I will take the liberty to give my views on the subject.

I differ from those who believe that plowing in clover and sowing the ground alternately with wheat, is the most profitable course of farming, or the best method of raising wheat. I consider pasturing the clover two seasons with sheep more profitable to the farmer, more enriching to the soil, and more beneficial to the wheat crop, than plowing it under. I will endeavor to give my reason for this opinion, and leave it for the cultivators of the soil, for the next ten years, to decide whether my views are correct.

It is well known to many farmers that dried vegetables, such as hay, straw and stalks, make more and much richer manure by being fed to animals, to say nothing of the profit of keeping the stock. But green vegetables, and particularly clover, are not much improved (as manure) by feeding, as they do not require the heat, moisture, nor the same amount of fermentation to prepare them for the food of plants and it is the economy of nature that nothing is lost; vegetables are the food for animals, and the breath and droppings of animals are the food of growing plants. But to my wheat growing.

Let us suppose that A. B. and C. have each 100 acres of good land, in equal condition for producing wheat, together with sufficient grass land for keeping the teams and other necessary

stock of the farm. Now, suppose A. divides his land into two equal fields of 50 acres each, and has one in wheat and the other in clover each year. The clover he plows under and sows with wheat annually, and he has 50 acres of wheat to harvest. If he pursue this course for ten years, his wheat crop, I believe, will not average over 20 bushels per acre—but call it 22 and it will be 1100 bushels; from which deduct 50 bushels for seed, and he will have 1050 bushels for market. Call this 6s. 6d. per bushel, which is as high as we can calculate for an average, and it will make $853.12 yearly income for A.

B. divides his land into three equal parts of 33⅓ acres each, one of which he has in wheat, the other two in clover each year. He also keeps 450 sheep; these he pastures on his fallow till it is plowed, instead of plowing in the clover as A. does. The third field he divides with a temporary fence, and takes 20 acres of it for hay, which, together with his chaff and straw, will be sufficient for his sheep; and the 13 acres not mown, together with the fall feed on the meadow and stubble, will afford ample pasture for the sheep after the fallow is plowed. B. having 16⅔ acres less wheat to sow and harvest, his expenses of labor will be very little more than A's. His sheep will make his hay and straw into excellent manure, which he must put on the 20 acres of mowed land, and this is to be his next year's fallow.

B's 33⅓ acres of wheat will average for ten years under the sheep system, 27 bushels per acre, or 900 bushels—from which take 33⅓ for seed, and he has 866⅔ for market; this, at the price before named, will give him $704.16 for wheat. His 150 sheep will yield in wool and increase of flock, $1.50 each, or $225 in all, making the whole amount of B's income $929.16.

C. divides his land into ten acre lots, with several of the division fences temporary, so as to be removed at pleasure. He will have annually 30 acres in wheat, 10 in barley, 10 hay, 20 pasture, and 10 in hoe crops, of which 2 acres should be potatoes, 3 wurtzels, and 5 corn. He will keep two hundred sheep, (which he can do, and keep them well,) and breeding sows sufficient to raise 20 hogs annually for market. The hogs and sheep will make all the stalks, hay, and straw into valuable manure, which will be much improved by feeding the sheep with wurtzels. The 3 acres of wurtzels, 5 of cornstalks, 10 of hay, and 40 of straw, will winter 200 sheep well; and the fallow, together with the after feed on the mowed ground and stable fields, and twenty acres of pasture, will be abundant for their summer keeping.

The 10 acres of mown land must be well manured and plowed in the fall, for the next spring's hoe crops; the 10 acres previously hoed must be plowed in the fall for barley; and as soon as possible after the barley is off, give a shallow plowing and thorough harrowing, so as to vegetate all the barley and other seeds on the surface, then give it a light dressing of well rotted manure, plow it well, and sow it with wheat. In this way, C's thirty acres of wheat will be, ten after barley, and twenty summer fallow, on which his sheep were pastured till plowed. The 20 on summer fallow, will average 30 bushels per acre for 10 years, owing to the increased quantity and the quality of manure he will annually apply; and the 10 after barley, will be as good as A's 22 bushels per acre—making the whole amount of wheat, deducting 30 bushels for seed, 790 bushels, worth, at the price stated, $641.89. Then the 10 acres of barley will average 40 bushels per acre; (this has been my average yield for ten years past,) deduct 20 bushels for seed, and the remainder, at 3s. 6d. per bushel, will be worth $166.63. The 3 acres of corn, highly manured, will yield 50 bushels per acre; deduct 1 for seed, and keep 30 to feed the sows and young pigs, and the remainder, at 3s. 6d. per bushel, will be $95.81.

The wurtzels feed to the sheep and hogs in winter; the two acres of potatoes, with the thirty bushels of corn, and the stubbles, &c., will keep the sows and twenty hogs raised for the market, until they are a year old, when they will average 200 lbs. each on foot, at 2½ cents per pound, which will be $100. The sheep, at $1.50 each, will be $300: the whole together making an income for C. of $1304.32. But he will have extra expenses in cultivating his land; he must employ three extra laborers—one for the year, at $120, and two for seven months, at $12 per month—$168: but these men will do each one month's work in harvesting and thrashing, which will be worth $18 per month. If we deduct this from their wages, it will leave $234, as the extra expense of cultivating C's land: deduct this from the proceeds, and his income will be $1070.32.

Each of these three farmers must use alike of plaster, say eight tons per year—five on their land and three on their manure in the yard. Their wheat must all be seeded each year with clover, and B. and C. must add three quarts of timothy per acre. But their expense in seeding will not be greater than A's, owing to his having more acres to seed. If B. and C. do their duty in making, saving and applying their manures, B's ground will improve, and his crops increase over A's, and C's over B's more than in the foregoing estimated proportions.

RECAPITULATION.

Yearly income of A from 100 acres is		$853 12
"	B "	929 16
"	C "	1070 32

Now, fellow cultivators, test this matter for yourselves, and let your experience settle the question. But *do not forget* that C. must pay particular attention to his stock and *manure*—especially the sheep in winter.

Wheatland, Aug., 1844. WM. GARBUTT.

From the Central New York Farmer.

FALL PLOWING.

MESSRS. EDITORS—Will you allow one, who has derived much instruction and pleasure from a perusal of your pages, to contribute his small share to the common stock of agricultural knowledge, by placing at your disposal a short communication on the subject of fall plowing. The season is now at hand when this work should be performed, and I beg leave to state some of the advantages which are, in my opinion, to be derived from it. One important advantage to be derived from fall plowing, is a more thorough and complete pulverization of the soil intended for spring crops, than could otherwise be obtained. This, on stiff soils, is of the first importance. The action of the frost during the cold season, has the effect to divide and pulverize the upturned furrows, and to separate the parts, so that in the spring a mellow tilth is found, which cannot fail to be beneficial to all crops we may desire to raise. Upon this point, I am not aware that there is any difference of opinion, and I only call attention to it here for the purpose of urging the advantages of fall plowing. And, as a means of facilitating this process of pulverization, the plan of lapping the furrow slice is undoubtedly to be preferred. To this, I am aware, many persons object, but to me it seems capable of the fullest demonstration, that as by lapping the furrow both the surface and the edge of the furrow slice are exposed to the action of the atmosphere, a more perfect pulverization must take place than when the flat surface only is exposed, which must be the case when the furrows are turned perfectly flat, as is frequently the case. There may be, and doubtless are, good reasons for flat plowing even in the fall, as on ground where the grass is tall and cannot otherwise be covered, and perhaps other causes. But these are only exceptions to the general rule. At other seasons of the year, and on dry or porous soils, it is doubtless proper, in many instances, to invert the soil so as to leave a smooth and even surface. But I have been led from the subject of fall plowing to a dissertation on the method of plowing generally. Another reason for fall plowing, although it may be considered only as consequent upon those before alluded to, is the fact, proved by the almost unanimous voice of farmers, that crops on fall plowed land are generally better than on land plowed solely in the spring. I have known excellent crops grown on ground which was plowed in autumn only, without any preparation in the spring further than a thorough harrowing, and so far as my information extends, has proved generally successful.

I desire, however, to mention one other argument in favor of fall plowing, which I regard equally important with those already mentioned. I refer to the great advantage of advancing the spring work by having, as far as possible, all the plowing done in the fall of the year. In those sections of country, where winter grain is not extensively grown, and where, consequently, the principal reliance must be on spring grain, the spring work is excessively fatiguing and laborious, especially for teams; and any method which will relieve this branch of farm labor, must be advantageous to the farmer's interest. It not unfrequently happens, too, that land intended for spring crops is so much saturated with water in spring as not to admit of plowing until just about the season for sowing or planting, so that when the land is to be plowed, the putting in of the crop must inevitably be delayed beyond the proper season. Add to this the consideration that all crops can be got in in better season, and all the operations of the farm performed in a more proper manner, when sufficient time is allowed, than when all the labor of plowing and putting in crops, fencing, &c., is crowded in the short space of two months, and we have, as I should think, sufficient reasons for practising fall plowing to a much greater extent than is now prevalent in this country.

I have now given you my views at sufficient length upon this subject, and will only add that if any of your readers hold to different principles from those I have advanced, they will confer a favor on your correspondent, and doubtless on the public also, by communicating them to you, where they will have a fair chance of becoming known to the community. I do not desire controversy, but shall be ready to discuss the subject with persons entertaining different views, provided the discussion can be properly conducted and with a view of arriving at correct results.

I have, however, written sufficient for my first communication, and will close by expressing the satisfaction which I have derived from agricultural reading, and urging upon farmers the propriety of sustaining agricultural journals.

August, 1844. PLOWMAN.

From the Central New York Farmer.

THE REAPER'S HARVEST SONG.

The light winds gambol among the flowers,
The clouds have rolled away,
And the mists have fled from the leaping streams
Before the coming day,
And the ripened grain on the fruitful plain
Invites us, "*sons of toil*,"
Now, with ready hands to gather in
The products of the soil.
For lo! 'tis the harvest time,
The blessed harvest time.

Away to the harvest field, away!
The sun wheels up the sky;
No bondsmen we, but untasked and free,
Our sickles keen we ply;
And the waving ranks of bearded grain
Fall prostrate on the field,
And grateful we bless the HAND that gives
Such full and ample yield.
For lo! 'tis the harvest time,
The blessed harvest time.

Work! work! for the day will soon be gone!
We may not linger now,
Each trusty steel ply with earnest zeal,
With bared and moist brow.
In faith we sowed, and with gladness reap
The bounties GOD has given;
And fondly trust when He binds his sheaves,
He will gather us in heaven:
At the coming harvest time,
His blessed harvest time! DE VERE.

Cassville, N. Y., August, 1844.

WEDNESDAY, OCTOBER 2, 1844.

☞Look at the swamp and meadow lands, (says an exchange paper,) with which our country abounds, that are now worthless, and causing sickness and death in their vicinity. All these might be reclaimed, and made the most productive land, by a small outlay of time and capital. The owners have neither because they have too much land already calling for their attention. The muck contained in these places, can be made to pay better interest than bank stock: yea, it properly used, it may be the farmer's mine of wealth."

☞A writer in the London Gardener's Chronicle, says he has entirely discarded the old mode of allowing cucumbers to run on the surface of the ground. He trains them to trellises, and finds that he has not half the trouble with them that is required by the old plan, and that the plants continue much longer in bearing, when so treated.

Coal Tar as a Paint.—This article, which is abundant and cheap, has long been used successfully as an economical paint, particularly for iron. A correspondent of the American Agriculturist says:—"I think it would be well to call the attention of farmers to the use of coal tar as a paint. The tar produced in coal gas-works is used extensively in England for painting fences, out-buildings, &c., and is being introduced in this country also. It never alters by exposure to the weather, and one or two good coats will last many years. It is the cheapest and best black paint that can be used. Our buildings are painted with it; all our apparatus also; and even the wrought-iron pipe we place in the ground is coated with it. I think if its advantages were fully known, it would be generally used throughout the United States. The Government soak the bricks used in building the Fort at Throg's Neck in this tar, which renders them impervious to water; and posts painted with it are protected from rot, when in the ground, as effectually as if they had been charred."

☞Last year, (says Dumfrie's Courier,) we stated that a gentleman of our acquaintance had planted beans in the same rows with potatoes. The result, we learn, exceeded his expectation, the produce being 36 bushels of beans and 12½ tons of potatoes per acre, both of excellent quality.

☞Two tea-spoons full of finely powdered charcoal, (says the N. Y. Herald,) drank in a half tumbler of water, will, in less than fifteen minutes, give relief to the sick headache, when caused, as in most cases it is, by superabundance of acid on the stomach.

Guano.—The Lancaster Guardian says: The most easy and simple method of detecting an adulteration in guano, and also ascertaining the quality of the article, is the following:—Take four pounds of guano, and add one quart of water for every one of guano; stir them well together, and let them stand for a few days; if the guano be good, it will float an egg or a potato, and if it floats well, add water in half pints until the egg or potato sinks to the bottom; and that guano which floats an egg with the greatest quantity of water is the best. If any earth or sand has been mixed with the guano, it will be found at the bottom of the vessel.

☞A correspondent of the Exeter News Letter gives the following reasons for early rising, which are conclusive. It is to be regretted, however, that, with many, fashion and idleness are of superior influence to sound reason. The writer says:—"The practice of early rising should be adopted—1st. Because nature does not require but a few hour's sleep. 2d. The morning air is the most healthy and invigorating to the system of any in the course of the day. 3d. The body and mind are better prepared for the necessary business of life in the early part of the day than any other. 4th. By avoiding the habit of sleeping in the morning, there are more hours of consciousness and activity, so that life is made to appear longer than it otherwise would."

☞Those who wish for neat bedsteads, (says the British American Cultivator,) should wash them well with boiling water, and then put quicksilver, beaten with the white of eggs, in every crack and corner. One white is enough for a bedstead, with as much quicksilver as it will receive. It is the only thing that will keep bugs away when the bedsteads cannot often be attended to. It is a certain poison to bugs.

Tomato Tart.—The New England Farmer says: Roll out your dough very thin, and place it on the plate in which you intend baking your tart, and slice your tomatoes very thin, spread them over the dough very thinly, take about two table spoonsful of brown sugar, and one of ground cinnamon bark; spread the two over the tomatoes, bake it well, and you have a fine tart.

☞The British American Cultivator says that the fumes of brimstone will remove fruit stains and iron-mould from linen and cotton. Moisten with cold water, then hold it over the smoke of the burning brimstone.

Large Pears.—We were presented (says the Southern Geo. Recorder) by a friend, a few days since, in DeKalb county, with a pear weighing within a few grains of 1¼ pounds. The same tree from which it was taken, we were informed, was full of others equally as large, if not larger. They are quite juicy and well tasted.

☞Two or three spoonsful of strong ley, made of oak ashes, and mixed with molasses, are recommended as a positive cure for croup.

☞A writer in the Michigan Farmer, recommends buttermilk for the destruction of lice on cattle.

From the Southwestern Farmer.

CURING PEA VINES.

Your correspondent, C. M., in calling the attention of your readers to the curing of the pea vines, deserves, at their hands, thanks. It is an important means of keeping stock, which, if well cured, will do better than any other species of forage we have. I have seen it cured for 20 years, and as the mode is different from his, I beg to give it to you, leaving to your choice to dispose of as will suit you. After you have either cut the vines near the ground, or pulled them up, leave them in a swath until they have wilted, not taking longer than half a day. Then, with forks, throw them up into hand-cocks, small at the base, and as high as will not press together, only by their own weight: after remaining thus for a couple of days, open out for an hour or two in sun and haul up. Having provided a rail pen with surplus rails, and boards to cover, then put rails in for floor a few inches above the ground, a foot or so apart, on which throw in some 2 or 3 feet thick the vine; put on another floor of rails, and fill again 2 or 3 feet: continue thus until the pen is 10 or 12 feet high and cover. Many persons fork in a layer of straw of any kind, oats, rye or wheat, with every layer of the vine; many use salt in both ways, and no question but what it is as saving in the end.

Now for the reason. If the vine is cured as "fodder or other hay," you will lose every leaf, much of the stem, and one entirely unacquainted with the vine, would lose nearly all—for they would let it remain until dry. Lucerne, clover and pea vine, require the same treatment, there being so much sap in the stalk that you would lose all the smaller part before the stems, or thick part, was cured—but by merely wilting, the leaf and leaf-stalk is retained in a degree, and by throwing into cocks, the air passes through: the moderate heating it receives has a tendency to ripen the juices, making sweeter for stock, and toughens the vine—and very little exposure will cool it off.

Some persons pull and put in pens as above, and the use of salt will protect: it may mould a little, but try the mouldy part to even a well-fed mule. Those who are saving to their land all they can, will not pull up the vine, but cut off with a grass knife, saying the tap root is a benefit, and ought not to be taken from the land. One thing I press on those who have no experience—rather run the risk of losing, by having put up too green than too dry. I have seen them in a house 14 by 18 and 12 feet high, when 2 to 3 feet from the wall they were very hot, yet stock ate them very greedily. I thought they were lost.

Saving Seeds.—"Like produces like," is a general law of nature; the same both in the vegetable and animal kingdom. If a cultivator, then, desires to have any production earlier than usual, let him procure the first seeds that ripen on a well grown and productive plant, and so proceed year after year, and he will obtain this desideratum.

Every variety of vegetable may be rendered more productive, by selecting every year the seed of the most productive and well-formed plants. For instance, peas that grow in long, full pods, on vines that bear abundantly; and if you would have them earlier, take those which ripen first; choose beans the same way; select the finest heads of grain for seed before reaping; select seed corn from stalks that bear two or more good ears, and take the largest and best formed ears. Choose from stalks that are large at the bottom and run off to a small top, not very high. For early onions, select seeds that ripen first, and have good form: turneps the same, and so on, following the same rule throughout. There is no work, attended with so little care, which is so much neglected by the farmer as this.—*Plow Boy.*

Go to Work.—There are thousands and tens of thousands of young men among us whose only resource against the accumulated miseries of

a destitute manhood, and a disgraceful old age, is the workshop or the farm. It is useless, at this day, for every young man to aspire to the lot of living by his wits, for it is a task in which few who undertake it have the talent requisite to ensure success. How many there are at present "loafing" away the precious years of youth in our cities and villages, who ought to be acquiring the rudiments of some honorable and useful trade. Learning is by no means incompatible with the practice of the arts; for, the more one "knows" the more likely will he be to succeed, and to do honor both to himself and the profession in which he is engaged.—*Plow Boy.*

From the New Haven Palladium.

The Halo or Solar Phenomenon.—The Rings around the sun yesterday (September 9th) for two hours before and after midday, appear to have been generally observed by our citizens with much interest, and to have awakened an intelligent curiosity to learn more respecting appearances of this kind, and their causes.

The present Halo was remarkable for its duration, and afforded favorable opportunities for observation. About mid-day, it consisted chiefly of two complete rings, one about 45 degress in breadth encircling the sun at its centre, and the other about 72 degrees broad, having its center in the zenith, while its circumference passed through the sun. The smaller circle was accompanied by an eclipse of the same major axis and of small eccentricity. Directly opposite to the sun, 36 degrees north of the zenith, the circumference of the larger circle was intersected by two other circles of nearly or quite the same diameter, forming, at the point of intersection, a bright spot, such as would naturally result from the combined light of the three luminous rings. The ring that encircled the Sun exhibited the colors of the rainbow, frequently with much vividness and beauty. The other rings were white, and fainter as they were more distant from the sun. Small portions of circles, however, with prismatic hues, appeared at different times both in the East and West.

On recurring to works that give an account of solar halos of past times, it will be seen that the majority of them correspond, in their general features, to this, having a circle and eclipse around the sun, a large circle with its circumference passing through the sun's center, and two other circles intersecting this at a point directly opposite the sun. Thus in the 7th and 10th volumes of the American Journal of Science, two halos are figured bearing all these characteristics. The circles, however, are sometimes still farther multiplied, and of dimensions varying from the present.

Such a uniformity of structure must depend on *some* law, which regulates the formation of halos; but the nature of this law is not fully developed, although its investigation has occupied the most eminent opticians, as Descartes, Newton, Huyghens, Mariotte, Young and Brewster. The cloud which forms the basis of the phenomenon, is always the same, both in the solar and lunar halos, consisting of a thin, gauze-like, milky vapor, called by meteorologists, *cirro-stratus.* It is known to be very high, falling within the region of perpetual congelation, the lower limits of which, in our latitude, are about two miles above the earth. The moisture deposited by these clouds, would be in the form of snow or particles of ice, and it is from the peculiar reflections caused by the bright surfaces of such crystals, that these phenomena are believed to be produced. Not much difficulty has been experienced in accounting for the production of the ring that encircles the sun, since its cause is somewhat similar to that which produces the rainbow; but to explain the origin of the ring which has its circumference in the sun's center, has been found much more difficult. The reflection of the sun's light from crystals of a cylindrical and prismatic form, has been supposed to furnish a clue to the explanation, although it has not always clearly appeared how this would produce the appearances in question.

From the Southern Agriculturist.

PARTICULARS OF THE EXPERIMENT OF MARLING

Mr. Editor—I noticed in the last number of your valuable journal, a communication headed, "Successful Marling," in relation to a field I had marled for the present crop of cotton, in which the writer expresses a desire to learn the particulars of this experiment. It affords me pleasure to give any information in my power on the subject, being fully satisfied myself, from a previous trial, of the great efficacy in the use of marl. I instituted this experiment to endeavor to put its beneficial effects beyond doubt, and to convince those who were yet sceptical of the inestimable value of this substance. Your author has been misinformed as regards the land which was marled being an *old field.*

The following were the particulars of the experiment:—Twenty-five acres of very light high land was cleared of its original growth, oak, hickory and pine, in the winter of 1842, and planted in cotton every year: in February last, the beds were levelled with the hoe, and the marl carted on, at the rate of 150 bushels to the acre, which was well pulverized, and strewed over the field as equally as possible—strength of marl 70 per cent. The land was bedded in March and planted on the 1st of April. Ten rows through the middle of the field were left without marl. The cotton crop has suffered very much from continued drought, the marled cotton much less so than any other. In the above experiment no manure was used. It was my intention to have had the cotton of this field kept separate, in order to test its relative production with that of my other fields, but during my absence from home, the cotton was mixed.

In 1843, a square of 105 feet was marled in the same field, at the rate of 100 bushels to the acre—marl 70 per cent. The beneficial effects were very evident, particularly in the early maturing of the fruit: a gentleman, who visited this field in the summer of 1843, was asked his opinion as regards the appearance of this square of cotton; he replied; that it was more luxuriant; that he saw very few blossoms compared with the other portion of the field: on examination it was discovered that *pods* had taken the place of the *blossoms*—showing evidently, that the marled square was at least ten days in advance of the other.

The bed of marl is about one mile from the field: when not interrupted, carted twelve loads a day—seven bushels a good load for two small mules, the road being very rough.

Yours, &c., John A. Ramsay.
Charleston, Sept, 17, 1844.

Fruit Trees.—Plant a few trees of the best kinds you can get; if not rich food for the palate, hogs will not refuse them. If you will listen to old saws you will never plant any; there will some be found who have not succeeded—they, of course, condemn the fruit, rather than their own management.—*Plow Boy.*

CONTENTS OF THIS NUMBER.

Communications....153
Extracts from Colman's Agricultural Report...154-155
Individuality....155
Comfrey....155-156
South Carolina State Agricultural Society....156-157
Farmers' First Lesson in Chemistry....157
Wages of Farm Laborers in England....157
Wheat Culture....157-158
Fall Plowing....158
The Reaper's Harvest Song....158
Editorials, etc....159
Curing Pea Vines; Saving Seeds....159
The Halo, or Solar Phenomenon....160
Particulars of the Experiment of Marling....160

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References.—Rev. C. S. Dodd, Rev. W. T. Brantley, Rev. G F. Pierce, Dr. W. H. Turpin, Mr. J. M. Adams, Mr. D. Hand, Augusta; Gov. Crawford, Milledgeville; Dr. E. E. Jones, Madison; Col. Wm. Jones. Warren; Dr. F. George, Jasper; Mr. W. B. Munro, Columbus.

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VOL. II. AUGUSTA, GA., OCTOBER 16, 1844. No. 21.

SELECTIONS, EXTRACTS, &c.

From the Farmers' Cabinet.

WORN-OUT LANDS.

In the American Farmer, of December 27th, appeared an extract from a communication by John Jones of Wheatland, to the Farmers' Cabinet, in which he makes allusion to the astonishing effects brought about in the renovation of worn-out lands in Delaware, by Dr. Noble, of Philadelphia. On land which cost but fifteen dollars per acre, and produced but five bushels of wheat three years ago, by the application of eight loads of manure, costing, freight included, less than one dollar and fifty cents per load, the Doctor has raised forty-seven bushels of wheat from *one* acre, and from the remainder rather less, the average being an enormous increase over the produce of former years. The Editor of the American Farmer expresses an "increase desire" to learn the secret by which the Doctor has been enabled, at the small expense of less than twelve dollars per acre, to effect such astonishing results.

We would inform him there is no secret whatever in the method pursued, but such as any farmer might discover for himself, if he would but take the trouble to read some of the numerous works upon the application of chemistry to agriculture, lately published. Knowing by chemical analysis or examiuation, the composition of the grain and straw of wheat, and that of the soil, it was an easy matter to apply those materials which were needed, in order to produce a healthy and vigorous growth. He prescribed for his wheat and soil as he would for a patient, and with equal success, health and strength have been restored to the suffering subject.

The Doctor formed a compost obtained from various sources, consisting of the refuse of tanners, soap boiling establishments, &c.; in short, of such animal and vegetable substances as contain soluble salts, or which can be made subservient to the growth of plants. In the selection of these substances he was guided by their composition, as made known by chemical analysis. "Give," says the rational agriculturist, "to one plant such substances as are necessary for its development, but spare those which are not requisite, for the production of *other* plants which require them."

"An empirical," or quack system "of agriculture, has administered the same kind of manures to all plants, or where a selection has been made, it has not been based upon a knowledge of their peculiar composition." The phosphate of soda or lime, the silicate of potash, and sulphate of ammonia, or other salts containing these in other combinations, are necessary for the production of wheat; these have been supplied by the Doctor, and why should we be astonished at the results which have followed their application? He has adopted the *scientific* method of manuring, and if his knowledge of the composition of the soil and wants of the crop was exact, and his conclusions correctly drawn, he could not err in the application of his manures. His is *indeed* a triumph of science over the old fashioned, uncertain, and empirical mode of farming; here is an example worthy the attention of every farmer, and especially should it be considered by those whom prejudice has so blinded that they cannot perceive the vast benefits arising from the judicious application of scientific knowledge to agriculture. It is indeed "creditable to the Doctor as a scientific farmer;" we hail him as a benefactor, and desire that he may persevere in that path of usefulness in which he has found both pleasure and profit. J. S. L.

Philadelphia, Second month, 6th, 1844.

LABOR-SAVING PLOUGH.

The Columbia (So. Ca.) Advocate says:—The following is a description of the Labor-saving Plough exhibited at Greenville, S. C. We also append certificates furnished by gentlemen who have tried the Plough, in order to satisfy the incredulous that it is no "humbug." Our readers are aware that it was highly approved by the committee appointed to investigate its advantages over other similar ploughs.

Labor-Saving Plough, or a new and improved model.—The subscriber has tested the utility of this Plough by six years experience. It is an improvement taken from a Plough first constructed by Mr. C. Garlington, and afterwards improved by Mr. Smith, and combines the following desirable qualities:

In the first place, its structure is such as to prevent the horse from injuring the corn or cotton with his feet. In cultivating hill sides the rear Plough fills up the furrow made by the one in front, which cannot be done so compactly with the single plough. On stony land from the operation of two plough shares and the increased weight, the work can be performed much better than with a single plough. In new land, the double plough does superior work after the land is broke with a coulter. It is not impeded by roots any oftener than the single plough. One round finishes a cotton row.

Mode of Planting.—After the land is broken up, I lay off with a single shovel plough, drop the corn, and then plough round it with the double plough which makes a beautiful ridge, a little the highest in the centre. After the corn is large enough for ploughing, plough round it with a shovel on the stock, the earth can be thrown from each side, so as to cover all the grass, and cotton can be made with less hoeing than the ordinary plough requires.

MITCHELL SMITH.

N. B. I can plough six acres in each day, the week round.

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I have used the plough of Mr. MITCHELL SMITH, above described, and concur fully with the representations made by him. It is, in my judgment, the most valuable plough I have ever seen. In using it, I have worked a single horse, and have found it easily drawn with the ordinary shovel ploughs on the stock.

H. C. YOUNG.

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LAURENS DISTRICT, S. C., Nov. 9th, 1842.

Dear Sir: I am highly pleased with the improvement that you have made in the construction of a tool that is of such vast importance in cultivating our soil. I commenced my crop with it and ended with it, and I am now able to say to you that I have gathered nearly as much more of corn and cotton to the hand, than I have ever done heretofore. I find the objections that I had, previous to using it, were groundless.—It requires no more strength to manage it than any other, it matters not what may be the situation of the ground; to say the least of it, I have no doubt but that in a few years you will see them used more than any other farming tool now in use. Yours with respect,

JNO. W. WALLACE.

CURE FOR FOUNDER.

The seeds of sunflower are the best remedy known for the cure of founder in horses. Immediately on discovering that your horse is foundered, mix about a pint of the whole seed in his feed, and it will give a perfect cure.—*Cultivator.*

SHELL-FISH AS MANURE.—Having noticed the good effects of shell-fish in gardens, applied to carrot and onion beds, it occurred to a gentleman of our acquaintance that the same species of manure would be found equally useful on a larger scale, in the case of a green crop cultivated in the open field. Accordingly, he instructed his laborer to repair to the shore, and excavate four cartloads of live shell-fish, composed chiefly of wilks, cockles, and muscles. When carried home the deposite was thrown into a heap, and allowed to remain until it began to emit an unpleasant odor. Warning thus given, the shells were smashed and mixed with peat earth, to absorb the moisture and facilitate the application. They were then laid in the drills, after the manner of bones, at the rate of 16 bushels per acre; sown with turnips; and, the better to test the utility of the experiment, turnips were planted the same day over thick layers of barnyard manure. The seed on the shells took a wonderful start, the plants showing themselves at the end of three days, notwithstanding the intense drought; while the dung operated so slowly, that eight days elapsed before the slightest tendency to greening appeared.

Thus far the shells and substance enclosed have worked perfect wonders, and bid fair to outvie crushed bones, and even guano. The carbonate of lime and animal matter in shell-fish are great nourishers of vegetable life.—*Dumfrie's Courier.*

PRUNING FRUIT TREES.

Hints on the system of Pruning Fruit Trees, as practiced in the London Horticultural Society's Garden.

As the raising and cultivation of fruit trees forms one of the principal objects of pursuit by a great mass of people in this enlightened country, I should be pleased to offer a few hints (if you should think them worth publishing) on a proper system of pruning, and a few first principles in connection with it, which may prove useful to some of your readers who are not thoroughly acquainted with that important operation—important, because on the performance of it, in a great measure, depends the health, vigor, and production of fruit. To have a true knowledge of it, it is necessary that the operator should be in some measure acquainted with the laws that govern vegetation, and know the functions the different parts have to perform; for, unless he does, how can he be sure of the consequences that are to follow; and it is no ways improbable that that which was intended for a service, may turn out an evil; hence it is obviously necessary that the operator should be acquainted with vegetable physiology, in order to insure success; quite as necessary as it is for the surgeon to know the functions of the human system, in order to perform a successful amputation.

I shall now endeavor, and at the same time hope, to satisfy your readers, by pointing out the principal thing that is necessary to be known, namely, the functions of the leaves. It is essential also to know that every part of a plant, from the minutest fibre to the ponderous stem, has its own useful office to perform; but as the development of all those parts entirely depends on the leaves, it is on that account I consider them the principal organs of the vegetable fabric.

The roots absorb moisture (containing the food of plants) by their extremities, and it is transmitted from them through the stem by means of channels, formed by nature for that purpose, to the leaves, where it undergoes a chemical process. The fluid, on entering, contains many different substances, owing to the particles of matter it meets with in its progress through the vessels of the alburnum. This fluid does not become the proper food until it is duly exposed to the sun's rays which act on the cuticle of the leaves, when that fluid that is superfluous passes off by evaporation, and that which is left becomes elaborated and prepared as the proper food, passing into the system, and depositing a new layer of wood to the outside of oxogenous, and to the inside of endogenous structures, passing on to the roots, always leaving something after it, that adds to the diameter of each part it passes through, and finally elongates the tips of the roots or forms new roots. The matter that does all this is prepared by the leaves, by which alone the great importance of them is clearly shown. It is an admitted fact that the greater the quantity of leaves over a given part, the more that part increases in diameter. The secretions for fruit are likewise prepared by the leaves, and deposited in the tissue for the ensuing year's fruit; hence the more leaves the more secretions for fruit will be formed. But this does not hold good in all cases; for instance, strong, rank leaves that hold or receive no proper juices, and leaves not fully exposed to the sun's rays, are of no use for the formation of secretions; therefore, if the leaves are not properly exposed to the sun's rays, digestion is prevented, and they become worse than useless. It is highly essential that the juices are prevented from being lost in the formation of useless wood.

The system I am going to describe, which is practised in the London Horticultural Society's garden, and first put into practice in England, by Mr. R. Thompson, the acknowledged leading pomologist of Europe, principally depends on summer management. It is as follows:

Allow the young shoots to grow until the leaves become too crowded; then cut off their growing points only. By this means you will stop their elongation and confine the juices to the already formed leaves, where they will become fully elaborated for the ensuing year's fruit, which would not occur so readily if left to the formation of useless wood; for, be it remembered, it requires the secretions properly prepared, by the action of the sun's rays, in order to produce fruit; this check will cause the shoots to throw out lateral branches, which must be stopped in the same manner, for the confinement of the juices, as already described.

This system of summer pruning will be found to be of the first importance in the production of fruit, and it requires but little trouble when properly attended to. Winter pruning is only a secondary object when compared to this system, and I hope it will be clearly seen, when the principles here laid down are properly investigated. All that is necessary in winter pruning is, to remove all useless and superfluous wood. For peaches, nectarines, and apricots, plenty of young wood is required, and the operator should be guided by the health and vigor of his trees, the soil and situation in which they grow; all these circumstances must be taken into consideration, to perform the operation aright. The system I have described will be found to answer the summer pruning of vines and fruit-bearing trees. B. CARMICHAEL.

Nonanton Hill, Newton, April, 1844.

From the American Farmer.

WORK FOR OCTOBER.

We have the second Fall month upon us, and with it brings its toils and its pleasures—while its toils consist in preparing the ground, and committing the seed to the earth, those toils are not without their pleasures, for they force the mind upon the anticipation of the profits which are to arise from them, and excite in it those pleasurable emotions which spring from the belief, of after ability to meet engagements and contribute to the wants and comforts of one's family—and such reflections as these to the man of warm and generous sympathies are beyond all price, for they serve to assure him in the hope, that those on whom his every affection rests will be well cared for, and that those with whom he may have pecuniary engagements, will have no cause to complain of confidence reposed. And now let us turn to the work which the season requires should be done, and that quickly,

ON THE FARM.

Wheat.—It is full time that every farmer should have his ground in a state of preparation to receive his seed wheat, and perhaps, it would be better that he had it already in the ground; for we must confess that, notwithstanding early sown wheat is subject to the *fall ravages* of the Hessian Fly, still, we would rather run the hazard of that enemy, destructive as it is, than that ample time should not be given to the plants to attain a sufficient strength of roots to resist the action of frosts. This is our opinion, and it is for our readers to exercise upon it their own better judgments.

Preparation of Seed Wheat.—To avoid smut it is always safest to subject the seed wheat to a soak previous to sowing. This soak may be either made of the ley of wood ashes—a brine of salt; or stale urine, either to be made strong enough to bear an egg, and after permitting the seed wheat to remain therein for twelve hours, it should be taken out, drained, and have a sufficient quantity of slaked lime mixed with it to cover or whiten each grain of wheat. The wheat should in every instance be sown immediately after being taken out of the soak and powdered with lime, as if it remains long exposed after being thus prepared, it is apt to suffer in its germinating powers. We prefer, except upon a close lay or grass-sward, to plough the seed in 3 or 4 inches, then to harrow and roll. The rolling brings the earth in immediate contact with the seed, promotes early vegetation, ensures a much better stand of plants, and prevents washing.

The following recipe for a soak for seed wheat, has come very opportunely to hand, and we give it a place here. As the *initials* will show, it comes from an individual, who, besides being the great *pioneer* in Agricultural improvement in this country, has been its constant, untiring and enlightened friend for near a quarter of a century—and who has richly earned the name of Agricultural benefactor.

TO PREVENT SMUT IN WHEAT.

To the Editor of the American Farmer:

I always read with especial interest your own remarks and advice to your patrons as to the "WORK" to be done at particular seasons. In your 4th of August number, to which, (having been for some weeks absent) I have just looked back, you recommend, as you have well and repeatedly done before, that wheat should be *steeped* before it is sowed—can there be any doubt that every grain would be better for it, —steeps well prepared, of good ingredients, serve to kill the eggs of insects, to throw off the unsound grain, and as a *manure* for that which is to be committed to the earth. I lately read of one to *prevent smut in wheat*, which my informer, Mr. Dechest of Tennessee, said he knew to be *infallible* after very many experiments. You may not have published it,—it is this: Dissolve a pound of *blue stone* in as much water as will cover five bushels of wheat, and let it remain therein about 18 hours before it is sowed, and, as he says (allowing me to use his name) you will never have smut in your wheat.

I. S. S.

Quantity of Seed per Acre.—Less than two bushels per acre should not be sown, as a smaller quantity than that will not sufficiently cover the earth, to exclude those pests of the wheat field, weeds and grass, and very certain are we, that full seeding tends to increase the product.

Finishing the Seeding.—No wheat grower should consider his seeding finished until he shall have run water furrows through and around his field, to carry off the rains of winter and keep the plants dry.

Rye.—If there be any who may not have got in his Rye, there is still time, provided *no time is lost*, and he plow in his seed some three or four inches, and harrow and roll it well.

Quantity of Seed per Acre.—From 4 to 5 pecks per acre is the right quantity—but as the season is late we should prefer the latter, as it will allow some loss from winter killing.

Fall Plowing.—All stiff clayey grounds will be the better of fall and winter ploughing, provided that work be done in good weather, when the earth is not *wet*. To plow clays in that state is always injurious, as they become little better than mortar, and seldom can be got into good condition during a season; but if plowed when in good condition in the fall or winter, the best effects are derived from the exposure to the frost.

Hogs for fattening.—These should be penned early, as they take on fat much faster in moderately warm weather than in cold, and consequently consume less corn. They should be given charcoal, ashes, rotten wood and salt while being fattened; and it is important that regularity should be observed with regard to the times of feeding and watering.

To save corn, cooked pumpkins serve an excellent purpose in the commencement of fattening.

Cattle Stabling and Shedding.—All cattle should have dry quarters during winter, and if you have not stabling or shedding to afford it, let us advise you to put them up, as the saving in feed will more than compensate for the cost in a very few years, besides the satisfaction it will afford you, to know that your stock is secure from the winter's rains, sleet and snows.

Pumpkins.—Gather these before they are injured by the frost, and stow them away in some dry place, taking care not to pack them but a few rows high, and not to put any unsound ones among those which are sound.

Fences.—Examine all on your place, and repair such as need it.

Orchard.—Gather your fruit by hand as soon as ready. Be careful to do it in dry weather, and put them away carefully. Your trees may be pruned of dead limbs; but the wound must be cut smooth and covered with a mixture of equal parts of fresh cow dung and clay, taking care to cover the application with a thick cloth to keep out rain. The trunks of the trees should be painted with a mixture of soft soap and flour of sulphur, in the proportion of a gallon of soft soap to 1 lb. of sulphur.

Draining.—Your wet ground should be drained during the fall months.

Buckwheat.—This grain should be cut before it is nipped by the frost, as its straw is good feed for your cattle.

Work Cattle of all kinds must receive additional attention during this month and the next, as it should be an object with you to carry them into the winter in good condition.

Potatoes and Turnips.—These roots should be gathered before they are frosted. Let them be taken up in dry weather and securely stowed away where they will not be liable to become frozen.

Beets, Parsnips and Carrots.—See to the digging and putting away of these roots.

Cow Yard.—Before you bring your cattle in for winter let your yard be spread a foot deep with mould and leaves from the woods, and so spread as that the centre will be lower than the sides—all the materials you throw into it, will,

by the spring, be converted into first rate manure.

Sheep.—See that these animals have shelter through the winter.

We have thus travelled through the list of such duties as are most urgent of attention on the farm, and shall conclude our monthly task, by wishing you good markets for your present year's crop—good crops and good prices next year, and that health, happiness and prosperity may abound with you and yours.

From the Western Farmer and Gardener.

HINTS TO WOOL-GROWERS.

We confess our anxiety to see the growing of wool prosecuted in this country to a large extent, and with eminent success. To do this, our farmers must study the construction, organic structure, and habits of sheep, and the alike simple and increasing laws of nature, which govern the transformation of certain elements contained in the food of this valuable animal, into wool upon its back.

Both the quality and quantity of this product, as well as the health and vigor of the animal, depend, in an eminent degree, upon the constituent elements which enter into the composition of its food. If these be but poorly adapted to the formation of muscle, fat and wool, the animal must be poor, its fleece light, and its progeny more or less degenerated. On the contrary, if its food abound in the raw materials which go to make up these animal products, being merely changed into new forms and combinations by the action of vital organs, then such products will be abundant.

All concede the importance of a knowledge of the workings of his iron and woollen machinery to the manufacturer of broadcloth. All appreciate the necessity of his understanding the nature of wool, how to cleanse it by chemical agents, and both the art and science of making beautiful and fast colors.

We contend that the wool-grower who elaborates the great staple of the manufacturer of woollen goods, should in like manner understand what elements of the soil, air and water enter into the composition of these cultivated plants, which his living machinery can best transform into wool. He should also understand the operation of this machinery, which can be largely varied in its results, by changing the circumstances which affect it, and the raw material to be operated upon.

We have some twenty millions of sheep now in the United States, which elaborate for their owners not far from fifty millions pounds of wool per annum, or about two and a half pounds on an average per head. If we allow this annual clip to be worth as high as thirty cents per pound, then the fleeces will bring an average of seventy-five cents a piece. Allow that sixty-five cents per head, and the lambs will pay the whole expenses of their keeping, the nett profit is ten cents on each sheep. If by any means we can enable this wool-farming machine to elaborate only the two hundred and sixty-fifth part of a pound of wool MORE in each twenty-four hours than it now does, this will give an average fleece of three and a half pounds instead of two and a half, which at thirty cents a pound, will increase the profit on each sheep from ten to forty cents, or FOUR HUNDRED PER CENT!

This important gain to our farmers we believe to be practicable. To realise it, requires no additional outlay of labor or capital. It requires only a little more practical knowledge of the operations of nature, which yield the amount of wool they now get.

We desire to call the attention of our wool-growers to the propriety of keeping a distinct flock for producing long, fine wool, for worsted and mousseline de laines. Several millions of dollars have already been invested in erecting buildings and machinery for the manufacture of these fabrics in Massachusetts.

Mr. Samuel Lawrence of Lowell, a gentleman of great experience in the manufacture of woollen goods, thinks the Cotswold sheep one of the best varieties to keep for growing long wool. They clip from seven to nine pounds a head, when well kept. Mr. Erastus Corning, of Alabama, has a flock of one hundred and thirty ewes, which will shear seven and a half pounds each. These were selected with great care a few years since in England, by an experienced flockmaster, Mr. Sotham, who in company with Mr. Corning, imported them with a fine herd of Hereford cattle. A writer in a late number of the Boston Cultivator commends in high terms for the production of long, fine wool, a cross of the Leicester ewe with the fine Merino buck. A few millions of sheep, growing wool well adapted to the manufacture of mousseline de laines, would doubtless pay a better profit than those yielding either felting wool or coarse blanket wool.

To get these, we must improve our native sheep by judicious crossing, and by altering their keep. We must wisely adapt our means to the end we have in view—understanding aright the cause and effect from the first preparation of the soil to the packing of the staple in the sack for the market.

From the N. Y. Observer.

FRUIT TREES.

Age of Apple Trees—do Natural Trees outlive the Grafted?

"Apple trees live to a great age. There is a tree on Peak's Island, in Portland harbor, that has been known to bear fruit every season for more than a hundred years."

The above paragraph was in your summary of last week; and as I observe you have a small agricultural department in your paper, I take the liberty of submitting a few remarks suggested by the above extract.

The fact stated is unquestionable. I can well remember, when it was a common thing to see apple trees not only of vast age, but of immense stature. When I was a child, I can distinctly recollect the remains of an orchard, on my father's farm, the principal part of which the British had cut down, for fuel. Eight or ten trees only remained, a venerable cluster in one corner of the field. Almost every tree was not far from being two feet in diameter, and in form more like the lofty and wide-spread oak, than our present apple trees. Some of them were from forty to fifty feet high, and of proportional breadth. I can well recollect, aso, the gradual decay of these early tenants of the virgin soil, and the remarkable tenacity with which they clung to life. As one large limb after another decayed and fell, new and vigorous young shoots would spring forth and grow with astonishing rapidity. I recollect one tree in particular, whose limbs all decayed and fell off, one after another, till nothing but a hollow trunk, reduced to a perfect shell, about *eight* feet high, remained. And yet this apparently lifeless cylinder sent forth strong shoots near its top, which grew and bore fruit for many years. And it is now but a few years since the last remains of this ancient orchard were eradicated from the soil.

What rendred the longevity of these venerable trees the more striking was, that on this same farm was another orchard of *ten acres*, that had been set out with great care, only a few years before the revolutionary war, and was then too small to tempt the depredations of the enemy, and these trees long ago put on the appearance of premature old age; and now scarcely a solitary tree remains to remind one that the ground was once an orchard. In fact, it is many years since it lost that name. This orchard, I may add, had been grafted with great care, with a choice variety of fruit, and when I first knew it, was flourishing and productive.

I have stated these facts with some particularity, for the sake of suggesting some inquiries, as the following:

Is it common, now-a-days, to meet with very large and aged apple trees, except where they were set out on the virgin soil of the country? And if not, as I suspect will be found to be the fact, to what cause is the decay of our later planted orchards to be ascribed? We know, by sad experience, that many other kinds of trees, which once grew, in all these regions, almost spontaneously, and bore fruit abundantly, as the peach and plum, for instance, now require to be cultivated with the greatest care, and even then are exceedingly shortened. Many a time, when I was a boy, have I, after eating a fine peach, said to my companions, I will now plant this stone, and, if my life is spared, in three years, I will eat of its fruit; and as often have I realized the fulfilment of the prediction. In those days our hedges were loaded with peaches, which from their mere abundance, the very hogs disdained to eat, except to crack the stone and eat the pit! This fact I have witnessed with my own eyes. Why, then, has it become so difficult to raise peaches? Is it to be imputed to any change in the climate? or to the exhaustion of some particular property of the soil? And does not the same cause operate on our apple orchards?

But there is another inquiry which I wish to submit. Are not all these large and aged apple trees the production of *the natural fruit?* Can any man point me to an apple tree one hundred or seventy-five years of age, that was grafted, as our present method is, on the stock, or that was grafted in any way? Every man knows that a grafted tree is merely a continuation of the old one; and, therefore, though its existence be prolonged by insertion into a new stock, it will, notwithstanding, in a few years, put on all the appearances of premature old age; and the sooner, as the process of grafting has been the more frequently performed with the same variety.

We have become so fond of grafting and budding, that most men disdain a natural tree, however vigorous, except for a stock to be tortured and murdered; or, if success attends the transformation, to be consigned to an early death. But is this extreme wise? Where did our delicious, grafted fruit come from at first? And although the seed will not always produce the same variety, yet some of it will, or others still more excellent.

I will venture then, to suggest, in conclusion, that if we would cultivate more natural trees, of all kinds of fruit, and letting them stand till, "by their fruits ye can know them," and then preserve the good and destroy the bad, we shall not only obtain new and improved varieties, but greatly prolong the life of our trees. On the present procedure, one thing is certain as the course of nature—our finest fruits must soon fail. Of this we have striking evidence in the general failure of the Newton Pippin, which was once as universally fair as oranges, and of a large size, but now often small and knotty. Other examples might be given: but I must stop—my sheet is full. A LONG ISLAND FARMER.

From the Albany Cultivator.

GAPES IN CHICKENS.

MESSRS. EDITORS:—From all I have seen and heard on the subject of what is called the gapes in chickens, it is a disase which is not generally understood. I shall therefore give you my opinion on its nature and cure. This spring, having my chickens attacked as usual with the gapes, I dissected one that died and found its *Bronchus or wind-pipe*, (not the throat,) filled with small red worms from half to three-quarters of an inch long. This satisfied me that any particular course of feeding or medicine would not reach the disease. I therefore took a quill from a hen's wing, stripped off the feathers within an inch and a half of the end, trimmed it off with a scissors to about half an inch wide, pointing it at the lower end. I then tied the ends of the wings to the legs of the chicken affected, to prevent its struggling; placed its legs between my knees, held its tongue between the thumb and fore finger of the left hand, and with the right, inserted the trimmed feather in the windpipe (the opening of which lies at the root of the tongue,) when the chicken opened it to breathe, pushed it down gently as far as it would go (which is where the windpipe branches off to the lobes of the lungs, below which I

never detected the insect,) and twisted it round as I pulled it out, which would generally bring up or loosen all the worms, so that the chicken would cough them out, if not, I would repeat the operation till all were ejected, amounting generally to a dozen; then release the chicken, and in the course of ten minutes it would eat heartily, although previous to the operation it was unable to swallow, and its crop would be empty unless filled with some indigestible food. In this manner I lost but two out of forty chickens operated on; one by its coughing up a bunch of the worms which stuck in the orifice of the windpipe and strangled it—the other apparently recovered, but died several days after in the morning; in the afternoon upon examining its windpipe, I found a female worm in it differing from the others by branching off at the tail in a number of roots or branches between each of which were tubes filled with hundreds of eggs like the spawn of a fish; and although the chicken died in the morning, the worm was perfectly alive in the afternoon, and continued so for half an hour in warm water. While I was examining it in a concave glass under a microscope, it ejected one of its eggs, in the centre of which was an insect in embryo.

From this fact, I have come to the conclusion that when the female worm breeds in the chicken and kills it, these hundreds of eggs hatch out in its putrid body in some very minute worm which probably after remaining in that state during the winter, changes in the spring to a fly which deposits its eggs on the nostril of the chicken from whence they are inhaled and hatched out in the windpipe and become the worms I have described.

There is one fact connected with this disease—that it is only old hen-roosts that are subject to it; and I am of opinion that where it prevails, if the chicken houses and coops were kept clean and frequently whitewashed with thin whitewash, with plenty of salt or brine mixed with it, and those chickens that take the disease, operated on and cured, or if they should die, have them burned up or so destroyed that the eggs of the worms would not hatch out, that the disease would be eradicated.

I am also satisfied that the chicken has not the disease when first hatched; several broods that I carried and kept at a distance from the chicken-house where the disease prevailed, were entirely exempt. And chickens hatched from my eggs where they had never been troubled with this disease, were perfectly free from it; and a neighbor of mine who built in the woods half a mile from any dwelling, and has raised fowls for six or seven years past, and has frequently set my eggs, has never had gapes among his chickens.

With my first broods of chickens, there was not one escaped the gapes. But all that have been hatched since I had the chicken-house and coops well whitewashed inside and out, with thin whitewash, with plenty of brine in it, and kept clean, have been exempt from the disease, with occasionally an exception of one or two chickens out of a brood.

In operating on the chickens, although one person can effect, it is much easier done to have one to hold the tongue of the chicken while the other passes the feather down its windpipe, and by having a small piece of muslin between the fingers, it will prevent the tongue from slipping, which it is apt to do upon repeating the operation.

Yours, &c. C. F. MORTON.

N. Y., Aug., 1844.

From the Albany Cultivator.

PLOUGHING ORCHARDS.

If well done, and the trees not run over nor lacerated, is found to be a difficult work. To make it easy, get a short one-horse whipple-tree about fifteen inches long, and attach one of the horses by long traces to the plough; fasten the other horse before it, and let them go *tandem*.—A careful boy or man rides the forward horse, and another holds the plough. After the intermediate space between the rows has been ploughed in the usual manner by horses abreast, as near to the trees as convenience and care will admit, finish the rest with the tandem team, rigged as just stated. The long traces will allow the plough to run as near the trees as is needed, and the short whipple-tree can scarcely be made to touch a tree. Well tested by experience. J. J. T.

WHEAT.

We select the following paragraph, says the Southern Planter, from a long and interesting report upon the wheat crop, as particularly worthy of attention:

"A new variety of wheat, which has been very highly recommended, is the improved flint. Some of this has been obtained from the proprietor, General Harmon of Wheatland, New York, and distributed to the members of the national legislature and various distinguished agriculturists, by which means it will undoubtedly be tried very extensively hereafter throughout the whole country. Gen. Harmon's account of it is as follows: "The improved flint wheat has been improved from the old flint, by selecting the purest samples, and sowing them on sandy and gravelly limestone land, so that the berry is now larger and whiter, and the bran or hull very thin; the heads are longer; and the straw too is stiffer, and not as subject to lodge as formerly. This is the most valuable variety grown in this section of country. It bears a good yield, producing a beautiful berry, weighing 64 lbs. to the bushel, and producing more superfine flour to the bushel than any other variety I am acquainted with. It is not affected by the Hessian fly as much as many other varieties. The same gentleman has paid very considerable attention to the culture of different varieties, and makes a remark which deserves consideration. 'The greatest objection to new varieties from warmer latitudes, is, that they are not hung to stand our winter. I have sown the white May Virginia for five years; the first two years I was pleased with it; since then, it has been failing; it has not withstood the winters well, and the heads are growing shorter, and the berry more red.' He also thus speaks of his mode of culture: 'Thirty years ago we were in the habit of ploughing in the most of our wheat on smooth land; we used the common two-horse plough: but we became satisfied that some of the seed was covered too deep; the plough was given up, and the harrow has been used since. A few years since, I built me a three-cornered harrow, and, instead of teeth, I put in the common cultivator teeth, which I have used on my summer fallows, and for covering my wheat; the last time in going over it, I go north and south. This leaves the land a little ridgy and protected from the cold northwest winds, which are severe here in the month of March after the snow is off; when the roller is used after the harrow, it has been more killed out; and when the soil is made very fine, it is more liable to be winter killed. The common horse ploughs bury the seed too deep; the lately constructed quadruple plough answers very well.'"

Proper depth of Seed.—"As the result of some experiments respecting grain of different kinds—wheat, rye, barley and oats—in Germany, it is said that 'from two-thirds to three-fourths of the grain plants had their root stalk only one inch under ground, and exactly these produced the most stalks; one-fourth of them had their roots only 1½ inch deep, and had only half as many stalks as the first; at 2 inches deep, there were only 4 in 100; and 2½ inches deep only 9 in 1,000; but only one of them produced stalks, while in the first rye and wheat showed only 23-5 to 4 1-5 stalks. Winter wheat at 1 inch gave 765 root-stalks out of 1,000 as remaining in the earth, of which 34-7 produced stalks; at 1 to 1½ inch, of 1,000, gave 215 root-stalks, of which 2⅛ produced stalks; at 2 inches, only 17 root-stalks of 1,000, of which only 1 produced stalks. From this, it is clear that shallow sowing, if the seed is only so far covered as to sprout, and the germ is protected from immediate contact with the air, is preferable to laying the seed deep, because it springs up quicker, and acquires a stronger growth, and has hardier plants.' 'The climate and period of sowing, as well as the weather, will of course be considered in determining the depth. The warmer, dryer, and especially the more windy the climate, the deeper (other things being equal) the seed must be laid. Wet and cold weather requires a shallow sowing; a dry and hot season a deeper burying of the seed.' 'A *shallow* sowing is one which covers up the seed only half an inch thick; a *moderately deep* sowing, 1½ inch thick; and if from 1½ inch to 3 inches in depth, it is called *deep sowing*. The choice of seed is very important; and the remark may be repeated here, made in the last report, that the grain which is most suitable for nutritious bread, on account of containing the largest portion of gluten, is not the best for the seed. The neglect to observe this may have sometimes contributed to influence the crop. It is also well ascertained that grain threshed by the threshing machine yields seed far less suitable, on account of its being broken, than that threshed by the hand-flail. The amount thus obtained too from the sheaf is supposed to be one third less."

Rust.—"The question as to the best methods of preventing the diseases and attacks to which the wheat crop is exposed, is one of deep interest to the agricultural community; and some suggestions on this subject may not be inappropriately subjoined to the account of this crop.—The time when the field is struck with rust, seems to be just at the time of ripening. A remarkable fact on this subject is stated in a report to the New Jersey Agricultural Society.—An extraordinary field of wheat, supposed to be out of danger, on a hot day became drenched by a sudden shower, which came on between one and three o'clock, P. M. All was still; and on the passing away of the shower, the sun came out intensely hot. The owner went into his field to examine his wheat, which he found much pressed down by the shower: he immediately perceived a continued ticking, or snapping noise, in every direction. The straw was fine and bright; but, on examining it, he found it bursting in short slits one-quarter of an inch long, and the sap exuding from it. A day or two after, the whole field was darkened with rust, and the wheat nearly ruined. Another instance of the same kind is also related. The conclusion stated is, that the loss of the sap, running out and becoming dried on the straw, occasioned the rust.

"Mildew and rust are said to be more common now than before the Hessian fly made its appearance. Previous to that time the wheat was sown the last of August and the first of September, tillered largely, obtained great strength of roots, and was but little injured by winter frosts; the effect of which was to produce strong bright straw, with but few leaves; the consequence of which is but little mildew and rust.

"To avoid the fly, manuring high at seed time and sowing late was resorted to. This was attended by mildew and rust. Being sown late the plants had no time to tiller, or multiply and strengthen their roots and stalks; of course, the winter weakened and thinned the plants, which made the wheat still later in the season; and, when highly manured, the straw was full of leaves, very succulent, usually mildewed, and almost rusted. 'The means of prevention are—first, a good, dry, loamy soil, well prepared by cultivation, and not too recently manured, that by cultivation there may be a good assimilation of manure to the soil; the more complete the better. Cover the seed about two inches deep, either with drill or plough, that it may have good hold of the soil, and not be thrown out by winter frosts.' It is also said the French chemists, having witnessed the blighting of human food, have suggested the use of charcoal, to absorb the excess of the ammoniacal and other salts, which, taken with the plant in excess, during the warm showers, when the berry is

growing, cause the stalk to burst open, its juices to exude, and the seed to shrink. The result is stated to have been satisfactory. The mode of using the charcoal, as suggested, is by strewing it, well crushed, and as soon as possible, over the land; and that it be well moistened with soft water, by means of a watering-cart. Ashes have likewise been recommended by Liebig and others. Some suppose they, or some alkali, are necessary to dissolve the silicious substances, to furnish strength to the stalk. Liebig supposes it to furnish a silicate of potash—an ingredient in the growth of wheat. Some soils, peculiarly free from rust, it is said, are supplied with unusual quantities of potash. It has also been recommended, as a means of secur ng a good crop, notwithstanding rust, when the plants appear thin on the ground, in the spring, to sow spring wheat among the fall wheat. This plan has been resorted to with good success in Canada.

"Bone manure is likewise mentioned as very useful for grain, as bone is said to contain many valuable principles, such as fat, gelatine, carbonate and phosphate of lime. A striking experiment in confirmation of this is mentioned. The distinguished Berzelius, in 1817, is said to have analyzed a soil which had yielded crops of grain, from time immemorial, without manure. It was found to contain small fragments of bone; and after it had been boiled a long time in water, afforded a solution which yielded a precipitate to the infusion of galls. From this result, he conjectured that the ground had been a field of battle."

Smut.—From amongst several expedients to prevent the wheat from *smutting*, we copy the following which we know to be efficacious:

"The wheat, after being thoroughly washed, to be soaked ten or twelve hours in salt water, as strong as it can be made. It is further said that no injury will result if it lies in the brine for several days, provided it be in a cool place. After thus soaking it, let it be limed. Another person recommends that the seeds, when placed in the brine, be stirred up thoroughly, so that the light seeds may rise to the surface, and be skimmed off; afterwards, that the brine be drained into a tub, and the seed thinly spread on the floor, and sifted with quicklime, at the rate of one gallon to a bushel, and, after carefully stirring the lime through the seed a few times, and then sown. The seed which underwent the perfect cleaning gave a return of pure wheat; and that which was sown in its natural state was infected with smut, and had a mixture also of chess. In a Northumberland report on agriculture, it is stated that Mr. Culley, who grew annually from 400 to 600 acres of wheat, had but one instance of smut in forty years, and this was when the wheat was not steeped. Another experiment was tried on seed, in which were a few balls of smut—one-third being steeped in chamber lye, and limed; one-third steeped in the same, and not limed; and the remainder without steeping or liming; and the result was, that the seed pickled and limed, and that pickled and not limed, were free from smut, but the other had smutty ears in abundance. Another experiment was tried, by taking a peck of very smutty wheat, of which one-half was sown in its natural state, the other half washed as clean as possible, in three waters, soaked two hours in brine strong enough to bear an egg, and dashed with lime: the result was, two-thirds of the unwashed was smutty, but of the pickled and limed seed there was a full crop, without a single ear of smut. A similar experiment, somewhat varied, is the following: Of four sacks of smutty wheat, one sack was soaked in strong brine only; one prepared with lime only; one was soaked in strong brine, and then lay in lime all night; and the fourth was sown without anything: the result was, where brine only was used, now and then there was a smutty ear, but not many; where lime only was used, there was about the same quantity of smut; where lime and brine were used, not a single smutty ear could be found; and where nothing was used, it was a mass of smut. In another experiment, however, mentioned in the Southern Planter, wheat salted at the rate of a quart of salt to a bushel succeeded effectually in preventing smut."

FALL GRAFTING.

Capt. Josiah Lovett, who is distinguished for his success in raising superior vegetables and fruits, has given in the Magazine of Horticulture, his mode of fall grafting, by which he is enabled to get fine fruit from the scions the next season.

"Your remarks in the November number of the Magazine, for 1843, page 423, respecting my mode of procuring the specimens of fruit presented on several occasions at the Horticultural Society's rooms, last autumn, is partly incorrect; they were not procured by budding, but by grafting. I have practised budding with fruit buds for some eight years past, and occasionally succeeded in getting good fruit from them. It is now three years since I have begun grafting with fruit wood in autumn, (and I never heard of any person attempting it previous to that time) thus far I have been eminently successful with the pear and apple, (occasionally with the plum;) the grafts thus set have been more certain to mature their fruit, than the trees from which the grafts were cut; this can only be accounted for by supposing the sap to flow slower in the graft in the spring, in consequence of there not having been a perfect union with the stock in autumn; and the grafts, not blooming or setting their fruit quite as early in the tree from which they were cut, escape the injurious effects of our late spring frosts and cold north-east storms, to which, in our climate, we are so subject.

I select a healthy shoot for a scion, with fruit buds on it, I have them set a foot long with one or two side shoots. Immediately remove the leaves, and cut on one side in a sloping direction, to a point, the cut from one to two inches long: then with a sharp knife I begin at the point and cut just within the bark, up about half an inch above the commencement of the incision on the opposite side; then select a thrifty upright shoot, on a healthy tree, cutting well back, making a short stump; cut this stump in the same manner as the scion, reversed; and carefully but firmly bush one with the other; secure with bass or Russia matting, and cover with clay; or I prefer to mix equal parts of beeswax and Burgundy pitch; a less quantity of rosin will answer in the room of pitch; soften to a proper consistency with hogs' lard, and melt together, and spread on cotton shirting; and then cut in strips of one half to three quarters of an inch wide, and after uniting graft and stock, bind with this the cotton side next to the bark. The composition ought not to come in contact with the bark, as the bandage should be left on through the winter. If the grafts are carried any distance before uniting to the stock, it will be very important that the leaves be cut off under the tree, and the ends, as soon as possible, dipped in wax or something adhesive.

Very respectfully, your obedient serv't,
JOSIAH LOVETT.

Beverly, March 5, 1844.

N. B.—The mode of grafting above described is very similar to what is called whip-grafting by some, though I take much less wood with the bark than I have seen gentlemen do who graft by that mode.

From the Connecticut Courant.

PRODUCTIVE FARMS.

To a person not familiarly acquainted with the history and statistics of English husbandry, the extreme productiveness of the farms of that country, will appear incredible. Nearly nine-tenths of the cultivated lands in Great Britain and Ireland, are rented to tenants, who pay, usually, from four to five pounds sterling per acre annual rent. Where is the farmer in this country, who could live under such a burden? Here a farm comprising a hundred acres is often rented for one hundred dollars, and even at this rate the tenant has a hard task. The cultivation, even where there are a large number of acres in grass, will little more than pay the rent and taxes; but in England the result is widely different. The tenant who there pays £5 per acre annual rent, and finds all appliances, obtains not only a comfortable living, but in many cases wealth, from the prosecution of a business which here, with like burdens, would doom him to want and misery.

In 1811, Irwin estimated the produce of one English farm of eight hundred and ninety acres, at £8,578, or $38,000! The quantity of manure applied was 13,746 one-horse cartloads in one year, and 10,250 the next! Now admitting the rent of this farm to be $12 per acre, and the cost of manure and its application $12 more; and if to this sum we add, for interest, or expenses, taxes, and the various contingent expenses of cultivating, &c. $12 more, we shall find, upon striking the balance, that there will remain a profit of $10 the acre, amounting in the gross aggregate to the sum of $10,000 clear gain to the tenant in a single year!

In the vicinity of London, a hay farm, comprising one hundred and sixty acres was rented. The rental in this instance was $12 per acre, amounting in the whole to $1,920 per year. A very heavy expenditure was required for manure—probably as much as many a New England farmer would have been willing to give for the land, and yet the tenant succeeded, and has since become wealthy, and with no other income than the produce of his farm.

In Ireland, a poor man hired an acre of land, erected his cottage, purchased manure and farming tools, and the first season cleared all expenses and had a balance of £8 left. And yet that Irish peasant, in addition to the expenses and outlays above enumerated, had a church tax to pay, and to be at the expense of purchasing his own seed, and maintaining a family of four besides himself and wife. The frugality of the Irish peasantry is proverbial. But there was something more than mere frugality at the bottom of this man's success. There was *thorough cultivation*—a thing which in New England may be said to be wholly unknown. This is the mystery, and the only one. That Irish peasant, with like expenses, would have starved here on forty acres with our cultivation.

THE PEACH.

With the fertile soil of our country, we have but little difficulty in growing peach trees until they are three or four years old, when they are attacked by the worm in the root, or a disease called the yellow, and frequently by both. In either case the tree dies in two or three years.

The following remedies have been found perfectly successful in preventing the worm in the root. When a tree is first set out in the orchard, apply three quarts of fresh or unleached wood ashes, and add ashes every spring. Another method is to pour chamber-lye around the roots of the trees several times during the spring and summer.

The method pursued by Mr. Pell, of Pelham, Ulster county, New York, is to put one-half peck of fine charcoal to the roots of each tree when first set out in the orchard, and adding a quantity each spring.—*B. G. Boswell, Philadelphia.*

USE OF GRAPES.

Dr. Underhill strongly advises the culture of grapes, both on account of the profit to be derived from the sale of them, and from their value as food to sick and convalescent persons. At a late meeting of the New York Farmer's Club, Dr. Underhill made some highly valuable observations on this subject. After fifteen years' trial with various kinds of grapes, he prefers some of our natives, and recommends the Catawba and Isabella. He has three acres of the former, and seventeen of the latter. He says our people eat too much animal food, which renders their blood too thick, and causes diseases of the heart, liver and lungs. He thinks it would be infinitely better to substitute grapes and other fruit, with a little pure wine, for a portion of animal food.

From the Camden Journal.

THE DUTY OF OVERSEERS.

Mr. Editor:—I wish to give you my views on what I think the true spirit that should prompt all Overseers to their duty, and how they may best improve.

When an Overseer takes charge of a plantation, it is his duty to find, as soon as possible, the true situation of every thing on it, then to have a conversation with his employer relative to all matters which may be connected with his interest; and in this he should be particular to find out the views, feelings and wishes of the employer fully. The overseer should take charge of all, and take the same interest in every thing committed to his care as though it was his own, and more so— for if it was his own, he would not feel such a degree of responsibility resting on him, as that of another man who had employed and put so much dependence in him. This is the first step to improvement—for unless the overseer is actuated by these feelings, he will not improve, but must remain stationary. Next commences a wholesome and well regulated system among the negroes—and in this, the overseer will find use for all the wisdom, patience and perseverance mortal man can possess, for extremes either way, will prove injurious to all concerned—the overseer's feelings should be calm, collected and firm, with a desire not to inflict punishment, but from a sense of duty, he should act the gentleman amongst the negroes and to his employer, and expect to be treated in like manner from them all, for without this, all his efforts will not elevate him, nor can he command that respect which should be paid any gentleman, no matter what his occupation may be—and now, if the overseer desires to become *number one*, he has no time to loose—he should enter head, heart and hands into his various duties—he should read every thing that would improve him in agriculture, and combine theory with practice—it will greatly improve him—he should experiment on the various products of the soil every year, and the more he learns the more he will see the necessity for improvement. Nothing should pass without his notice and attention—he is not to look to this or that particular part of his duty—but all, and every thing under his care, should have his individual attention. The sick should be attended to faithfully, and in the discharge of that duty, he may improve by learning something of the art of medicine, and be able to treat all common diseases, which all overseers should do. It was once thought the cotton bag overseer was the man that might be called number one, but that time has passed by, and now the planters are anxious to get overseers who will attend to every little matter, and save expenses, and if the overseers wish to be number one, they must go with the times—they should make every effort in their power to make all the supplies for man and beast, on the plantation, and by proper attention to the raising of stock, the improvement of the soil, and to the making of every thing at home that can be made, they will soon find things so improved, that there will be an increase of not only that part of the crop that makes man and beast happy, but will greatly increase the cotton crop also. This I know from experience. Make the effort, my friends and brother overseers, and you will find what I have said to be true. Let us not be self-conceited when Providence smiles on our labors, and we are blessed with a few good crops, to think we know enough, and then become careless. No, there is no time to lose, if we intend to make ourselves good planters. In all we do, we should act from principle, and if the employer be a thousand miles from us, we should still be the same. And as changes often take place with overseers, one goes to another place, and one takes his place, and so on, that is the time if possible to be more particular than at any other time. They *should remember that golden rule, "do unto others as you would be done by."* How often I have heard employers complain of their overseers not taking any interest in any thing on the plantation, as soon as they found that they were going to leave, and I have often heard the overseers make the same complaints in taking charge of a plantation—finding every thing in such a bad condition, that it took them months to get things straight? An overseer that acts in this way, never will be number one—but they should feel it to be their duty to leave every thing as they would wish to find it. As soon as an overseer finds he is going to leave, he should have every thing in good order, and make a faithful return of all to his employer.

In conclusion, let me call on my brother overseers to unite with me in greater efforts for improvement; we have been long enough in the dark; it is our duty and privilege to come to the light and make ourselves not only good planters, but useful members of society, and a blessing to the country, and to leave means to our posterity, by which they may be able to fill more elevated stations than we are at present called to fill.

An Overseer.

From the Maine Farmer.

GREAT WASTE OF MANURE.

Not upon our land, for although injudicious application may be considered a species of waste, yet there is not so much to be complained of in regard to the application as the *non*-application of manures. The waste is in not saving, in not accumulating every thing of the kind which will fertilize the soil from which we take our crops. We know from our own personal experience and observing others, that twice as much—nay, three times as much manure may be saved—we will say saved—not manufactured, but saved, as there now is. How many sink spouts are there in the country, that are almost hourly pouring out their contents, to be floated away, *no where in particular*, and "to waste their fragrance on the desert air?" How many stables are there in the country, where there is not even the shadow of a fixture to save the urine and liquid particles of manure which are continually made there? Nearly all the barns are without sheds for manure. All that the cattle make during the housing time is thrown out of the windows, where it is exposed to the weather. The arrangement seems to be the very best in the world to dissipate the valuable parts and leave the poorest. It is, first a layer of manure—then a layer of snow—then manure—then a heavy rain—then a strong wind and sunshine—then manure, and so on. In the spring we shovel in what there is left us, and which is of such strong and stubborn material that the combined attacks of snows and rains, and freezing and thawing, and sunshine and winds, could not overcome, and this we apply to nourish our crops, and to supply the delicate and fine vessels of the rootlets with nourishment. Isn't this admirable? A little care and attention, and a small amount of labor, would enable the farmer to preserve and apply his manure in a much more judicious and saving manner. We do not hesitate to say, that we have found by experience, that when stable manure is housed until it is applied to the earth, it is one-third better—more efficacious, because more full of the necessary materials for feeding vegetation. Liquid manures are seldom, if ever, used among us. In Flanders it is a very common thing for a farmer to pay ten dollars (forty shillings of their money) for the urine from a single cow during the year. And what is the result of such a saving? Why this: More human beings are comfortably supported on a square mile than in any other country on the globe, unless it may be China, where equal attention is paid to these savings. There are various modes adopted for saving these things. One is to have cisterns into which it may run. The cheapest mode is to have some kind of compost which will absorb it. We find in the last New England Farmer a communication from Dr. Jackson, giving a very cheap but excellent mode of concentrating and preserving these fluids. His plan is the following: "Take twenty measures of dry peat and one of ground gypsum, and mix them together. Place barrels half full of this mixture in places where urine may be collected, and it will be found that the salts and ammonia of many barrels of urine will be consolidated in this mixture without giving the slightest odor, or being in any way offensive, for the salts are taken up, and the carbonate of ammonia, formed by decomposing urea, is immediately absorbed.

"This method of getting rid of a nuisance and of consolidating a valuable liquid manure, full of the most useful salts, ought to receive attention. A mixture of peat or swamp muck and gypsum (plaster of Paris) will also serve to absorb all the disagreeable gases of vaults, which will be converted into fertilizing compounds with the sulphuric acid of the gypsum and the organic vegetable acids of the peat."

Here, then, is a very simple but at the same time very efficient mode of securing the valuable ingredients of the sink and other disagreeable but *necessary* places about our premises; one which every farmer can adopt. A small pit, made with a covering to keep out sun and rains, filled with the above materials, would be a little mine of wealth to every farmer, and we may say a mine of health too, for it would swallow up all the pestiferous and noxious gases which must invariably arise from the decomposition of such offal.

SALTPETRE ON SEEDS AND PLASTER ON FLOWERS.

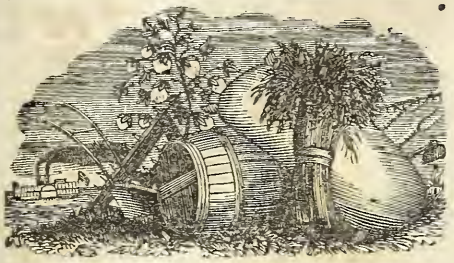
Hart Mussy, Esq., of this village, tooka small portion of the corn with which he planted a field, and soaked it in a solution of salts of nitre, commonly called saltpetre, and planted five rows with the seed thus prepared. Now for the result: The five rows planted with corn prepared with saltpetre, yielded more than twenty-five rows planted without any preparation. The five rows were untouched by the worms, while the remainder of the field suffered severely by their depredations. We should judge that not one grain saturated with saltpetre was touched, while almost every hill in the adjoining row suffered severely. No one who will examine the field can doubt the efficacy of the preparation. He will be astonished at the striking difference between the five rows and the remainder of the field.

Mr. M. also stated the result of another experiment. He has a fine, thrifty, healthy apple tree, about twenty-five or thirty years old; but it has never, in any one year, produced over about two bushels of apples. While in blossom last spring, he ascended the tree and sprinkled plaster freely on the blossoms, and the result is that it will this year yield twenty bushels of apples.—*Concordia Intelligencer.*

For three years we have published from time to time experiments and statements showing the value of the saltpetre soak for corn and other seeds, and yet probably not one-tenth of our readers use this or any other soak. For several years we have soaked all our corn with the most gratifying results. None of it has ever been touched by the grub, against which we, therefore, regard the saltpetre as a perfect protection, and it grows with a rapidity that shames the sluggishness of grass and weeds. We planted some corn this year, on the 6th of May, soaked as usual, and in just twenty-eight days it stood twenty-two inches high—ground rich but not manured this year. A pound of saltpetre in enough water to cover a bushel of corn is about the proportion.—*Louisville Journal.*

COWS.

Cows should have warm water for a few days after calving, otherwise they are very liable to colds, inflammation of the udder, &c. It is a good method as practised by many, to prepare the first drink by putting a shovelful of hot coals into a pailful of cold water, and after a few minutes take off the swimming coals, and then give the water to the cow, which must have become sufficiently warmed, and it will have acquired an alkaline quality which is considered beneficial.—*Boston Cultivator.*



WEDNESDAY, OCTOBER 16, 1844.

PLANTER'S CLUB OF HANCOCK.

☞The annual fair of the Planter's Club of Hancock, will take place at Sparta on Friday and Saturday, the first and second days of November. An address will be delivered before the club on Saturday by a member.

The friends of Agriculture, and the public are respectfully invited to attend.

TUTTLE H. AUDAS, Secretary.

Sparta, Oct. 10, 1844.

☞Editors friendly to the cause will please copy.

PROFITS OF RAISING FRUIT.

The product of one large peach orchard in the little state of Delaware was sold last year to a company in New York city for fifty thousand dollars, and it is said the company realized sixteen thousand dollars profit by the operation.—From the same orchard, fruit has been sold to the amount of one hundred thousand dollars.

For the Southern Cultivator.

ANALYSIS OF BLUE MARL.

EUFAULA, Ala., 25th Sept., 1844.

MR. EDITOR:—I wrote you from Elberton, Ga., on my way home from the West, giving my plan of preparing Cotton for market. I now forward you for publication, the analysis of the blue marl of this region, as prepared by the kindness of the Rev. Doct. Means, of Oxford, Ga.

—

Col. McDonald—

DEAR SIR:—I have made an analysis of the fine specimen of blue Marl which you were pleased to send me, and am entirely satisfied that it must contribute largely to the fertility of ordinary soil.

The productiveness of lands, you are well aware, depends upon a suitable proportion of the *earths* which compose them, and the comparative value of different marls must depend upon the constituent character of the soil for which they are designed, and the description of crop intended to be grown. Compact limestone, by an increase of aluminous earth, passes gradually into marl; and while in some instances the *calcarious* matter predominates, in others the *argillaceous* is most abundant. If, therefore, a natural soil be loose and porous, with a good proportion of sand, the *argillaceous* marl will give it adhesiveness and tenacity, and make it retentive of moisture; if on the contrary the soil is close and tenacious, the *calcarious* marl is preferable. The clay (silex and alumina) which constitutes in different marls from 10 to 95 per cent. of the mass, is best suited to tenacious soils when the *silicious* element predominates. Marls which furnish 25 per cent. of the carbonate of lime may be regarded as very rich. Indeed many locations (some within the limits of our own State, Georgia) do not give more than from 5 to 7 per cent. In the examination of your specimen, a quantitive analysis was not prosecuted, farther than to ascertain precisely the proportion of the carbonate of lime in the mass, which it was hoped would be sufficient for all practical purposes. I found it to contain of that salt 13.72 per cent, i e. every 100 grains of the marl furnished 13 72-100 grains of the carbonate. I found it also to contain *mica*, *silex*, *alumina*, and *iron*, the latter ingredient in considerable quantity; and, as I believe, in the form of the *sulphate* of the *peroxide*, constitutes an admirable substitute for sulphate of lime (plaster of paris) in soils which are designed for culinary vegetables, and especially what are called cruciferous plants, as the white and black mustard: also, turnips, cabbage, celery, red clover, &c., all of which contain sulphur as an element and ingredient, and require a soil supplied with sulphates, which by decomposition, the sulphate may be separated and assimilated to the purpose of vegetable life. *Nightsoil*, and especially human *urine*, which has undergone putrefaction, used in connection with sulphate of iron (green vitriol) furnishes, by a change of base, the sulphate of ammonia —an admirable salt to promote vigorous growth in the class of vegetables above named.

The silicious and aluminous portions of your marl are, I think, in fine proportion to meet the general distribution of the *earths* in most natural soils in your region of country. On the whole, your Alabama marl seems to resemble the Burlington county marl, New Jersey, and especially in containing shells and *iron:* the latter being by no means a common ingredient of marl; and I trust, if found in sufficient quantities, will brighten the auspices of an enlightened and patient industry—redeem hundreds of exhausted, unproductive acres, and clothe them afresh with annual luxuriance of a healthful and vigorous vegetation.

With sincere regard, yours, &c.,

Oxford, June 29, 1844. A. MEANS.

For the Southern Cultivator.

FORM OF A LEVEL.

MR. EDITOR:—There is diversity of opinion in regard both to the form and span of a Level that best adapts it to agricultural purposes. Some say 10 feet span, others 15, or more. I propose to make a few observations on this subject, to my brethren of the plow, and with as much brevity as possible, knowing that details on such a subject are apt to be uninteresting. I prefer the span of about a rod, for reasons presently to be assigned. The dimensions and the mode of constructing the one which I have used *personally* for many years in preparing for horizontal plowing, and which I have found very convenient, are as follows: legs 11 feet long, ¾ or ⅞ of an inch thick, 3½ inches wide, in the middle, tapered down at each end to 1¼ inch; cross them at 2½ feet from one end, and separate the other ends to 16½ feet; fit them together by means of a half mortise or *joggle*, and secure with screws; fit in and secure in like manner, a cross piece; from the large part of one leg to the large part of the other, it should be 2 or 2½ inches wide, and as thick as the legs; one other cross piece, about the size of the last, fitted and secured like it, near the top of the legs (above the cross) completes the instrument. Now for its advantages. 1st. More can be accomplished by it than by a narrow one in a given time.—2nd. It is lighter in proportion to its span than any I have seen, and may be made still lighter than directed, if strength be left in the middle of the legs, where the lower cross-bar is attached, and where all the strain falls in using it.—3rd. The ends of the legs (the feet we will call them) rest so obliquely on the ground as not to sink much, even in ground recently plowed.—4th. The point where the plumbline is attached,—in the middle of the upper cross-bar—is remote from the lower cross-bar, where the indications of the plumb are seen, thereby securing greater accuracy.—5th. It is more *conveniently* portable; the cross of the legs may be put on the shoulder of even a man of low stature, and the instrument carried to, or from, or about the field, without any exertion of the arms or hands. Of course it is carried in the hand like all others, when in *actual use.*

A simple and sufficiently accurate mode of ascertaining the perpendicular of the level, is as follows: put the feet as near on a level by the eye as possible, and mark where the plumbline strikes the lower cross-bar, then reverse the feet, putting each one where the other stood before, and mark again where the line strikes; the centre between these two marks, is the correct perpendicular. Now to prepare for laying off drain ditches, move one foot of the level until the plumbline settles to the centre mark, then raise one foot two inches by putting a block under it, and mark where the line strikes or settles to, and put figure 2 over it on the cross-bar, then raise the same foot one inch more or 3 inches altogether, mark where the line strikes and put 3 over it; then raise, mark and place the figures for the other foot in the same manner. The instrument is now prepared for *leveling*, ascending or descending at the rate of 2 and 3 inches to the rod.

Chopping with a hoe to indicate to the plowman the course that the level has gone, is, in my opinion, a very poor, though common expedient. I prefer the following mode: split out a sufficient number of little sticks, 12 or 15 inches long, about as large as the little finger, and sharpen them at one end, one of which is to be stuck at the foremost foot of the level, at each successive stride, bringing the hind foot to the stick from which the fore one was last taken. The grounds of my preference are,—1st. *Expedition*, instead of the delay necessary to make several chops with a hoe; at a word, the stick is stuck down and the level is again in motion. —2d. *Accuracy.* The point is precisely shown, where the fore-foot was taken from, and where the hind one must be placed.—3d. *Economy.* A little boy, incapable of handling a hoe for any length of time, can carry and use a sufficient number of sticks; moreover, the plowman who succeeds, can see the course of the row and follow it, without the necessity of an extra hand to lead his horse; and further, the zigzags in the row, occasioned by furrows and ridges, and oth-

er slight inequalities in the general surface, may be corrected without any detriment, but with actual advantage to the work, by the plowman leaving such sticks as stand out of the general course, on the right or left, as circumstances require.

COLONUS.

Covington, Sept. 28, 1844.

For the Southern Cultivator.

MR. EDITOR:—Amid the political excitement of the day, it is pleasant to see the progress and success of enterprises intended to promote, and which will promote, the prosperity of the South. The story of Swift about the blade of grass is more truthful than old. To the South, it is equally as important to save as to grow this additional blade of grass—and he may be regarded as a benefactor who shall practically teach the one or the other. Lest, however, I should incur the imputation of Southern infirmity—of great talk and little work—I shall at once give you the result of my examination of a mill, recently put in operation by A. N. Verdery, Esq. This mill grinds the ear of corn as it is taken from the stalk; that is to say, grinds shuck, cob, and grain at the same time..

The shuck, after being passed through the mill, presents less in substance than might be supposed, unless, indeed, a large portion has been converted into meal. That which is distinguished in the mass is soft and elastic, and is in small shreds.

The cob is not distinguished from the finest particles of the grain.

The grain is chopped into hominy, such as is usually adapted to table-use; but of course intermixed with a large quantity of meal.

The experiment was made with the whole ear of corn, stripped of the shuck, and the mill ground in less than two minutes a bushel of hominy, in which, as before stated, the cob was a distinguishable component.

No experiment as to time was made with the ear with the shuck on, owing to the want of skill in giving the mill its proper *feed*.

This enterprise is not claimed as original, though the proprietor has never seen a similar mill in operation. Those who have tried the experiment on a smaller scale declare that seven bushels of corn ground up with the cob is equal to twelve bushels according to the usual mode in which it is given to stock. If there be superadded the benefit of the shuck, it would be but reasonable to suppose that the saving to the planter will be one half. Again, experience, limited as it is on this subject, proves that stock, especially old horses and mules, are more uniformly kept in a thrifty condition, when fed in this way, and are certainly less liable to disease. The cost of mills will vary from $50 to $300.

From the Maine Cultivator.

MANURE COMPOST.

Manure is virtually the farmer's capital, the bank, if we may be indulged in the expression, upon which he can alone draw for those important and essential accommodations, without which his industry and economy in other matters will be of little or no avail. There is not a farmer almost anywhere whose resources in this particular are not amply abundant, and whose farm might not, in a short time, be brought to almost any degree of productiveness the owner could reasonably desire. Nature has provided, by a wise economy, that nothing which has once been inspirited with the energizing, identifying principles of life, shall be worthless in the great work of perpetuating and nourishing its kind. But it is not simply to the animal and vegetable kingdoms, that the farmer is to look for the means of enriching his soil. The various mineral substances embedded in, and constituting, to a certain extent, the surface of the soil upon which we tread, are endued with certain distinctive and emendatory properties which render them efficient assistants in the labor of improving and enriching our fields.—Even the hard and compact substance of flint is capable of yielding, upon decomposition, a principle essential to the growth and nutriment of plants; while the various mineral substances of our common fields and gardens, are capable, when commingled in proper relative actions, either of weight or measure, of evolving principles not only highly beneficial to the health of plants, but indispensably necessary to their successful development and growth. In the formation of compost manure, one thing, however, is indispensable, and this is, that we attend strictly to the nature and constitutional character of the soil to which it is to be applied. If it be of a clayey or argillaceous texture, the basis of the compost intended for its amelioration, should consist principally of sand. But if, on the contrary, it be of a sandy or silicious character, the compost should be mostly of clay. Soils that are naturally *humid*, should have such alterants applied, and in such quantities, as will bring them to a proper consistency; while those that are arid and liable to injury from a too rapid descent or evaporation of water, must be modified by the application of such remedial agents, as will tend to confer unctuosity, and prevent the possibility of injury from such a cause.

The most tenacious clays, and the most barren sands, may, by the application of such materials as tend to modify their obvious defects, be made wonderfully productive.

SAVE YOUR OWN CLOVER SEEDS.

Bear in mind that the second growth of clover, the rowen, contains five times the seed that you would find in the first cut. You can now gather the heads with cranberry rakes; or you can mow the clover and thresh it as you would thresh grain. You may raise better seed in your own fields than you will be likely to purchase at stores. You can have the large northern clover for mowing, if you choose; but you cannot always purchase the seed in the spring. The straw will be worth something—though not *quite* so much as if to cut when in blossom, notwithstanding what fancy writers may say.

You may obtain very pure herds grass seed when you sow on the green sward furrow in August. You can sow herds grass alone, and though weeds may come up with your grass, the winter will kill them, and you will have nothing for your sickle or your cradle but pure herds grass. When you raise seed for your own use you need not care if red top is mixed with your main crop. Your herds grass may be worth as much as coarse meadow hay, after you have threshed off the seed.—*Mass. Plough.*

A Recipe to Cure Diarrhœa.—Have a little bag made out of new linen, strongly sewed, of about four inches long and one inch and a half in diameter; stamp it full of wheat flour, as full as you can get it; tie the bag when filled, and boil it for an hour in clean water; then take it out and let it get cold; rip open the bag and take off the outer crust, which the water occasioned, take of the chalky part a tea spoonful in tea (it matters not what kind of tea) every hour. As soon as the patient feels revived, let him slack and take half a tea spoonful every two hours, and so on, diminishing the dose and time as the patient feels relieved, so as not to create costiveness. When I used this medicine, I took it without tea, but it is hard to swallow, keeping a little piece in my pocket which I used occasionally. The cure will be effected in about six hours. This innocent medicine has been sufficiently tried, and effected cures when all other remedies proved of no avail. As this medicine can be had without money or price, the writer of this assures the public of its entire efficiency, and wishes that every family may be in possession of this valuable recipe.—*Virginia Valley Farmer.*

CONTENTS OF THIS NUMBER.

Selections, Extracts, &c.

Worn Out Lands....161
Labor Saving Plow....161
Cure for Founder; Shell Fish as a Manure....161
Pruning Fruit Trees....161, 162
Work for October....162, 163
Hints to Wool Growers....163
Fruit Trees....163
Gapes in Chickens....163, 164
Plowing Orchards....164
Wheat....164, 165
Fall Grafting....165
Productive Farms; The Peach....165
The Duty of Overseers....166
Great Waste of Manure....166
Saltpetre on Seeds and Plaster on Flowers....166
Cows....166
EDITORIALS, COMMUNICATIONS.—Planters Club of Hancock, Profits of Raising Fruit; Analysis of Blue Marl; Form of a Level; Corn Mill....167, 168
Manure Compost....168

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SOUTHERN CULTIVATOR.

VOL. II. AUGUSTA, GA., OCTOBER 30, 1844. No. 22.

ORIGINAL COMMUNICATIONS.

For the Southern Cultivator.

ECONOMY.

STANFORDVILLE, GA., October 22, 1844.

Mr. Editor:—I propose in this communication, to give to the readers of the Southern Cultivator, a few thoughts connected with facts touching the subject of economy. The low price of cotton for several years has brought about a perceptible change, at least with a great many. There is more dependence now than formerly on our spinning wheels and looms for the clothing of our families. There are several of my acquaintances who do not buy any part of their negro clothing; and the good ladies of our country have applied their willing hands and hearts to prove to the world that they can manufacture clothing for their husbands and sons, that will make them appear as respectable as if they were clothed with goods that had passed through a custom house. Should not these efforts of the ladies stimulate the men to look well to their ways and means, and give their wives all the encouragement that the nature of the case requires; provide for them all the necessary conveniences, such as good cards, wheels, looms, warping bars, and spool frames, and not suffer their wives, as some men do, to be put to the necessity of going to a neighbor's to warp a piece of cloth. Perhaps the wife, in the course of a year, may lose a week in those kind of errands, while, if the husband was of the right kind of grit, he would make a pair of warping bars in one day, which, with care, would last to the third generation. There has a favorable change taken place with some men in this section in their manner of doing business, viz: they pay the cash for all their dealings as they take place. This is good economy, as goods for the cash can be had for at least from 8 to 12½ per cent. lower than they can be obtained on a credit; and when the cash system is carried out, how easy it is to settle up the year's business at Christmas, which is looked on as the time for settlements amongst planters. Not that I advocate the cash system any farther than is practicable: there are many men who are not prepared to stand up to it, therefore it is economy for them to have the good resulting from credit so far as it may be to their advantage. At the same time, no man should buy an article merely because he is getting a long credit on it, as pay-day will surely come and will not tarry, no not even for a rainy day. But after a man has contracted a debt he should use all the means within his power to be punctual in payment. If he is not ready when his debts become due, he should by no means be seen to slip around to avoid meeting his creditor, but should come up with a suitable deportment and frankly acknowledge his inability to discharge his obligations, and make the best arrangements he can with his creditor. This is good economy, as it gives some confidence and saves unpleasant feelings to both parties.

It is bad economy for a planter to undertake to make a crop with a worn-out set of tools, as the work is harder in every particular, nor will it be near as well done, neither will there be as much performed as could have been with good sharp tools. A good hoe-hand can do enough more work with a good hoe in one week and with more ease, than he could with an old, dull hoe, to pay for the good hoe; two good axe-hands can, with first rate axes, do more cutting in any given time than three can do with indifferent ones. Any man that has worked on a plantation, I expect, has done enough to have found that there was a great difference between a poor tool and a good one. A planter need not expect to have good plowing done with shackling plows and plow-hoes, and without good plowing it is idle to expect a good crop.

I am of opinion, Mr. Editor, that it would be good economy with us planters to increase the number of our sheep and reduce the number of our cows, as I know from experience that one cow, well kept, will yield more milk and butter than two or three without any extra attention. For any planter who has a plenty of land to afford sheep a good range, I consider them the most profitable stock he can have, taking into consideration the small amount it requires to keep them. Sheep, with a full supply of pasturage, with frequent changes from one place to another, or from one pasture to another, require but very little feeding through the winter. The best feed we have for sheep in this part of the country is cotton seed and good green fodder, and by giving them sufficient old fields to range on, this might be almost or entirely dispensed with. It will not do to keep sheep in small enclosures long at a time, let their feed be what it may. It is bad economy to feed sheep on sheaf oats. I have said to keep them up or in a small field, and feed them on oats, they would be soon fed to death; and I was not far from the truth, for I never have known sheep to do well when fed on oats long at a time, but altogether to the contrary. I have never found but that sheep do as well here as they do in Virginia, and as regards the ewes having lambs, they do much better, for it is not uncommon for lambs there to be frozen to death immediately after being dropped, which I have never known to be the case here. If we would keep the briers and burs out of the way of our sheep they would yield us as good a coat of wool as sheep do in the northern states, and so far as I have been able to judge, the quality is as good, after taking into consideration the difference in the breed, as we have none of the best blood amongst our sheep, that I know of.

I am, Mr. Editor, yours respectfully,

JOHN FARRAR.

P. S.—Your correspondent, Mr. Haygood, made some very justifiable remarks respecting seeds and seeds-men, in the Cultivator of the 23d instant. I think I can put Mr. Haygood in a way to keep in a stock of good seeds on a more economical plan, than to depend on seeds-men for them, viz: after once getting the kind of seed that suits him, to save his own seed from them. I have not bought any seed since I have come to the state, and perhaps have as good cabbages, beets, &c. as those who buy their seed every year. My plan for saving seed is to take as many of the best cabbages as I want for seed just before hard frost sets in, cut the root and part of the stalk off, and dig a trench deep enough to bury the heads, leaving the tops a little out of the ground, and lay some corn-stalks or boards over them in cold weather—in the spring they will take root and run to seed. Trim off all the weakly sprouts; save the best only for seed—should they get lousy, smoke them with tobacco or sulphur. By pursuing this plan, I have kept a stock of good and pure seed. Beets, turnips, &c. may remain in the ground where they grew till the last of January, or later, if cold weather—then take up as many of them as are wanting for seed, trim off all the small roots and set them out to bear seed. If the weather is dry when this is done, they must be watered. As they run to seed, trim off all but the best branches, the remainder will produce good seed without deteriorating. J. F.

For the Southern Cultivator.

OVERSEERS.

MR. EDITOR:—I read, with pleasure, in the last number of the Cultivator, an article on the "Duty of Overseers," written by "An Overseer." If all our overseers would read, adopt, and act up to the principles laid down in that article, the happiness, as well as the profits, of the planters would be greatly enhanced, and the agricultural profession, in every way, vastly benefitted; for a great deal depends on overseers. I have had many in my employment. I have taken uncommon pains in the selection of them. Have always secured men of the highest reputation, and never parted with but one before his year was out. Yet I can say that I have not had a single one, nor have I ever known a single one, who comes near up to the

full performance of his "*duties*," as laid down by the writer of that article. My experience is, that the first object of an overseer, when he comes on a plantation, is to convince the owner that he is a very big man, who knows all about planting and managing negroes, and has been accustomed and is entitled to have his own way: and that the owner, on the contrary, as he wears broadcloth, reads books, and perhaps dabbles in politics, must necessarily be entirely ignorant of planting and of his own interest, and would do well to let him alone while he manages his affairs and makes a fortune for him. His next object generally is to make it apparent that every thing is out of order or deficient. He soon discovers that your land is poor or worn—your mules broken down—your gears lost—your wagons, fences, buildings, all require repairing—an entirely new set of plantation tools must be provided for *his* use and on *his* plan—you are uncommonly backward in your work, and he doubts whether your corn and bacon can be made to hold out. He endeavors to impress it upon you that he sets out under the most unfavorable auspices, and if your crop is a failure, it is not his fault. On the contrary, if it succeeds, the utmost credit will be due to his skilful management. The next thing he does, is to flog every hand upon the place on the most trivial pretext, to let them know that he is master. And if you have any favorites that he can discover, he flogs them first and the severest. All this impertinence and brutality the poor planter must put up with the best way he can, for he knows that if he discharges his man for these things, he will have to discharge his successor for the same, and ultimately yield, or do without an overseer at all. He consoles himself with the idea, that as the year advances, he will draw the reins a little and have something of his own way. In this, he is often disappointed, and finally gives up in despair, or parts with his overseer after it is too late to repair the injury he has suffered. I have found, however, that with most overseers, by good treatment and forbearance—by winking at small faults—conceding every thing you can, and refusing to listen to complaints, unless very aggravated, one may get along after a fashion for the year or perhaps two. But the idea of having any of your plans exactly carried out, is almost hopeless. And whatever improvements you desire to effect, must be introduced with the most skilful diplomacy, or forced in by downright bullying. Your new plow is rejected with scorn—your imported breed of hogs is ridiculed without mercy—your crop is done for if worked in the least different from what your monitor has always found the best way. You must submit to all this with a good grace; and congratulate yourself, if you can, by any half-way compromise, get a tolerable experiment of any of your projects. And as soon as you have declined a re-engagement, you will find every thing at sixes and sevens. Plows, wagons, carts, all break down, and cannot, somehow, be repaired—fodder is plenty and covers the bottom of your stables. The corn will certainly last till Christmas, and that is all he cares for. If your meat is poor or badly cured, it is of no consequence, he will not have to eat it. The fences will do for his time: and why should he push on work and get in advance for another crop, the credit of which will enure to his successor. His intent is at an end as soon as he knows he is to leave, in every thing except to stretch the number of your cotton bags by packing light, that he may tell how many he made for you with such a start as he had.

"An Overseer" has drawn a picture of overseers as they should be. I have given you one of them as I have found them. And my experience has been among the best of the class, and not a few of them.

What is to be done? I say with "Franklin," whose articles I have seen re-published in the Cultivator, the planters must adopt new rules as to overseers. They must take their business entirely into their own hands, and require as the *cardinal qualification* of an overseer, that he shall obey their orders and carry out their plans promptly, cheerfully, accurately, to the letter and in the spirit. The interest of the overseer is temporary, limited, and often adverse to the owner, as his reputation, he thinks, depends on the amount of the crop for the given year. The intent of the owner is fixed, continued and universal. Every thing belongs to him, and he wants the use of them hereafter as well as now. He must look years ahead. He must sacrifice present gains for advantages hereafter. His plans must embrace the contingencies of a distant future, and must not be thwarted by the narrow views and contracted aims of a temporary agent. If overseers will follow the advice and exhortation of "An Overseer," it will be greatly to their advantage as well as to the advantage of the planters. But as it is not in human nature for a man to take the same interest for another, in all respects, that he will for himself, the planter will find it worth the trouble to watch over his own affairs under any circumstances. Taking overseers as we find them, he who does not, these times and with the prospects before us, should at least keep his eye upon the sheriff.

S. B.

For the Southern Cultivator.

AGRICULTURAL SOCIETY IN HOUSTON CO.

July 4th, 1844.

A portion of the planters of Houston county met this day at Perry, for the purpose of forming an Agricultural Society.

On motion of Gen. B. H. Rutherford: Dr. Chas. West was called to the Chair, and Col. J. D. Havis requested to act as Secretary. It was then

Resolved, That the Chairman appoint a committee of five, to draft a suitable constitution and bye-laws for the government of the Society.

Dr. D. B. Hamilton, S. Felden, J. C. West, T. M. Furlow and Dr. A. T. Calhoun were appointed that Committee.

The meeting then adjourned to the first Tuesday in August to receive the Report of the Committee. CHARLES WEST, Ch'n.

J. D. Havis, Sec'ry.

—

August 6th, 1844.

The Meeting convened this day, according to adjournment, Maj. James M. Kelly in the Chair; J. D. Havis, Secretary.

The Chairman of the Committee appointed at the last meeting for drafting a Constitution, made the Report of said Committee, which being adopted, the Society went into the election of officers, which resulted in the choice of the following: Gen. B. H. Rutherford, President; Vice Presidents, Judge D. Gunn, James McKinney, Capt. George R. Clayton, Dr. Charles West, Dr. C. T. Woodson, Maj. A. Smith, J. C. West, Dr. Bradwell, Maj. Belvin, Rev. A. T. Holmes, Mr. Cliett, T. M. Furlow, Esq., Maj. J. M. Kelly and Jesse D. Havis; Recording Secretary, Dr. David B. Hamilton; Corresponding Secretary, Charles Rice, Esq.; Treasurer, Dr. A. Calhoun.

A subject for discussion on the first Tuesday in October (our first regular meeting) being chosen, the Society adjourned.

JAMES M. KELLY, Ch'n.

Jesse D. Havis, Sec'ry.

SELECTIONS, EXTRACTS, &c.

AN ADDRESS.

Delivered before the State Agricultural Society, at their Meeting at Greenville, on Wednesday, the 11th of September, 1844, by John Belton O'Neall, and published in conformity to their Resolution.

On looking over this audience, I am tempted to ask each and every one, what is your occupation? Nine out of ten would answer, it is that of tilling the soil. Of the remaining one-tenth, almost every one, in a greater or less degree, has something to do with it. Of South Carolina, therefore, it may be truly said, her business and life is Agriculture. Yet in no part of the world, has less been done to give her the entire benefits of that business in which she is engaged. Until very lately, she has looked on the good around her, and has been content to waste, instead of using it. The deserted and desolate fields, and the groaning forests, as they fall before the axe, tell us too truly, that we have scarcely ceased to be the pioneers of Agriculture.

Still something has been done to recall the people to their true interests. This very Society, meeting annually for the last four or five years in Columbia, and embodying a great deal of practical, as well as theoretical knowledge, has done much. So, too, the District Societies, organized throughout the State, and annually collecting the Farmers together, and inducing them to think and write about their respective systems of culture, have created an interest and rivalry in farming, which has led to great and valuable results. This very meeting, intended to call out the Farmers of the mountain District, and to give to them the benefits of the State Agricultural Society, and to receive from them, in return, that stock of information which they possess in relation to their local agriculture, speaks for us in a voice not to be misunderstood, that South Carolina is at last thoroughly aroused to her dearest interests. Can I add anything to the interest of this occasion? If I can, duty as well as inclination will prompt me to do so; but I fear that a Lawyer and a Judge, although long deeply interested in Agriculture, will not be able to set before you, the matters which should interest you, in that light which a more experienced, practical Farmer could shed. Still, as you have desired it, I will try; if I succeed, all which I wish is obtained; if I fail, the attempt has satisfied the claims which you have upon me, and may open the way to some other, better qualified, and more successful than I may be.

On an occasion like the present, as a part of the Address with which I am charged, it may be well to consider first, briefly, two of the many popular objections urged to Agricultural Societies. It is supposed by some, that theory and practice are at war with each other; in other words, book-farming is one thing, and real, practical farming is another. But there is here a great and abiding mistake, founded in, and grow-

ing up by prejudice. Agricultural writers and Societies make, sometimes, it is true, mere suggestions—they are tested—it found to be good, so far, great benefit has been conferred upon the people; if, however, they fail, little harm has been done. But in general, Agricultural Societies do not rely on speculative suggestions. Their members are Farmers, understanding perfectly their respective modes of culture; each has tried experiments, and when successful, these are communicated, and others are thus encouraged *to try*. For example, can any thing in the wheat crop, be more important than a certain means of preventing *Smut?* A brother Farmer, John S. Carwile, Esq., many years ago, communicated to me his specific, which consisted in soaking the seed wheat during the night previous to sowing, in a solution of blue stone, in the ratio of one pound of blue stone to every five bushels of wheat. After many trials, my experience enabled me to say to the Newberry Agricultural Society, that it was a perfect antidote to smut, and my report, thus made public, has been spread throughout the grain growing communities, and many a farmer has been thereby essentially benefitted. Again, in Agricultural Societies, experiments in manures, and the crops adapted to the different soils, are made by various men, and the results are, in their reports, given to the people, so that the community have the opportunity not only of profiting by one man's success, but also even by his errors. These examples of practical results will be enough to remove one class of prejudices.

It is however urged by many a Planter, whose advantages of education may not have been as great as another's, it is useless for me to become a member of an Agricultural Society; I can neither write nor speak. It is true, when the elegance of erudition is combined with the practical knowledge of the Planter, as is so beautifully illustrated, in the bright example of the untiring President of the State Agricultural Society, it adds many charms to the usefulness of such a member. But this is not expected of every one. Like the trees of the forest, one may be more towering or more fruitful, still each has its place, and is useful. Every farmer—every man who tills the soil, is an important member of an Agricultural Society. We are in Society for the express purpose of combining every thing which can be gathered together. An Agricultural stream, is like your own Saluda; it is made up of hundreds of minor streams, some greater, some less, until they dwindle down to the drippings which fall from the summit of the Table Rock. We want the experience of every one, in the culture of his crop, whatever it may be. From that which he considers important to his success, we will find something beneficial to others. Let no one suppose that he cannot tell, or commit to paper, a plain statement of whatever he considers material to his success as a Farmer. I know that every one who has the gift of speech, or who can write a letter, can do it. For he who understands a matter, can make it be understood by another. In the Society of which I am a member, (the Newberry Agricultural Society,) many of our most valuable Reports come from unpracticed writers, plain farmers, tillers of the soil, who themselves, at some periods of their lives, have been accustomed to hold the handles of the plow. But it is not alone in the Reports of the Society, that a member's usefulness is seen. Every exhibition of practical success in crops, raising stock, or adding to the health and comfort of his slaves, is of as much, and perhaps more importance than that which is written. It teaches by example. It says to each and all, if I have succeeded, you can succeed by the same means. TRY. Having disposed of these objections, I come now to set before you the claims of Agricultural Societies and Agriculture.

Meetings, such as this, with an exhibition of stock, manufactures and crops, are other results from Agricultural Societies. What effect they will have, a year or two hence will better enable you to answer than now. In general, they will excite emulation among the Farmers; every one will try to surpass his neighbor. This spirit leads to improvement upon improvement, and a whole section of country will put on a new face. Where barrenness existed, fertility will be found—where wasteful habits of farming were common, more prudence will take their place. In all our rolling country, from the mountains to the flat lands of the seaboard, what more wasteful, impoverishing style of Agriculture could be adopted, than plowing up and down the hills? Yet that has been the universal habit until of late years. The consequence is, that the State is scarred all over with gullies, and the wasted hill-sides, bald and barren, stand before us, our reproach and punishment. Cultivation in drills, and horizontal plowing, or plowing around the hills, corects this evil. Agricultural Societies are the means of communicating this information, and inciting Farmers to try it. In a hasty trip to Asheville, in June last, I was delighted to see the improvements in Agriculture, which had taken place in Buncombe, in the last four years. One farm, within four miles of Asheville, presented, what is not common in this country, a mountain knob, plowed horizontally from base to summit, and smiling in corn and grass. Such an example, on the highway, could not, I was sure, fail to create a spirit of emulation, highly favorable to Buncombe. And in this expectation, I was not deceived. Everywhere, it seemed to me, she had stripped herself to struggle for the prize—*the blessing of skilful Agriculture on the poor land of the mountains;* and in part she has already received it. Can you not, my countrymen, in like manner strive, and in like manner succeed? If you have the will to try, I know you can and will.

Associations of men for all purposes are essential. Without society man could not exist. In the very morning of creation, God declared, "it is not good that man should be alone:" he therefore provided an help-mate for him, in lovely, smiling, erring, suffering, yet faithful and angelic woman. This principle of help, thus recognized and pointed out as necessary to man in the beginning, has descended to him ever since, not only in the blissful relation of husband and wife, but also in all the other various relations of life. Separate action seldom accomplishes much. Combined action is irresistible. These remarks will be better understood by plain men, from a few practical illustrations. If one Farmer, in some retired section of country, pursues a course of husbandry which makes his place blossom like the rose, what does he accomplish? He blesses himself and family; but as to the community, I could say of him, in poetic language, "Full many a rose" blooms "to blush unseen, or waste its fragrance on the desert air." Let him, however, become a member of an Agricultural Society, and his success will be their success, his example their example, seen, known and followed by hundreds. In the performance of any work, when much is to be accomplished, numbers are sought and obtained, as the means of accomplishing it promptly and easily. If a Farmer has his logs to roll, a house to build, or his wheat to cut, his neighbors are called in to aid, and that which his own force could only have accomplished with a great expense of labor and time, is the work of a day. Just so it is with an Agricultural Society. Individual improvement has been for more than an hundred years in the field, and has accomplished but little. Associations for Agricultural improvements are, comparatively speaking, of recent origin, and yet they have crowned the land with all the honors of successful husbandry. A Society in a District gathers in the people to the work, points out that which is to be done, and all, with the desire to surpass one another, go at it, with minds and hands devoted to, and prepared for the task, and the labor of more than an hundred years of separate action is thus, by combined energy and information, accomplished in a few years.

Farmers, too, have fewer channels of information relative to their particular business than any others. Politics, Literature and Temperance, have, through papers, meetings, and other sources, continual rills, which, united together, make up the mighty streams which flow through our land, to make it everywhere glad. But until recently, Farmer's Associations and meetings were few and far between. Now and then, it is true, an Agricultural paper, periodical or address, found its way into the hands of some enterprising Farmer, who read and profitted by it. Latterly, by combining Agriculture with Temperance, in the columns of the Temperance Advocate, Agricultural information has found its way into many a house, where it otherwise would not, and has excited interest among the yeomanry of the country, which never before existed.

So, too, the District Agricultural Societies have collected the people together; have, by addresses, reports, and exhibitions of stock, interested them in the cause; have made them conscious of their power, proud of their business, and shown them, both by precept and example, how it could be made better and better, year after year.

In the pursuit of an object and end, such as ours, every thing which will excite individuals to excel, is properly resorted to. Hence premiums are offered, not so much for their value, as the evidence of success. The public rendition of these, accompanied by such an address as that which the President of this Society, usually delivers, is an honor of which the successful ought to be, and always will be proud. But its usefulness does not stop here; it arouses the spirit of emulation in others, and blesses the country with fine stock, fine crops, and beautiful farms.

The annual, or semi-annual meetings of Agricultural Societies, with their attendant exhibitions of fine Stock, good domestic manufactures, and excellent specimens of grain and cotton, are calculated to deeply interest not only us, *the members*, but also the people. Multitudes will thus be drawn together, each meeting increasing the succeeding one. The Agricultural meetings of New York fully support this assertion. That of the last Fall, which called together so much of talent, enterprise, and success from the bosom of the State, and from the extremes of the old thirteen, Massachusetts and South Carolina, with the immense crowd of citizens, men, women and children, attended by their trains of stock, and every thing else to exhibit, proclaims, in a voice to be heard throughout our broad land, that in New York the people have made Agriculture and Agricultural improvement what it ought to be, their principal object. Can it not be so *here?—Could we talk less about politics, and more about crops; have fewer stump speeches and barbecues washed down with strong drink; more agricultural addresses, meetings and barbecues washed down with cold water, think you not, my countrymen, that in a few years we should be an abundanily wiser, more prosperous and happier people than we are now?* To my mind it is clear that we should! Such Agricultural meetings as this will do much to accomplish so desirable an object. We meet, from every quarter of the State, to become acquainted with one another as Farmers, to think, to write, to talk, to hear about, and to stir one another up to improvement in Agriculture. It is, I hope, to be the parent of many other such meetings in other parts of the State, until all her people, everywhere, will devote themselves to her greatest good: For South Carolina seems to be plainly devoted, by her local position, to three great staples, rice, cotton, grain and grass. Many of these different products can be grown upon the same lands. But the swamps of the lower country are more especially suited to rice; while the region in which we now assemble, lying west of a line on the latitude of Laurens Court House, ought to be essentially a grain and grass-growing community. The intervening country, between the two designated sections of the State, is a cotton country, not usually producing more grain than

is necessary for the consumption of the inhabitants. By inattention to the plain indications of nature, how much useless labor is expended! The attempt to raise cotton, as a crop, above Laurens, is really and truly a poor compensation to the husbandman. The beautiful rolling lands and level bottoms lying within this range of country, if judiciously cultivated in grain and grass, with no more cotton than household wants may demand, would crown the labors of the year with a fully equal reward. More money would thus, fellow-citizens, annually come to your hands from the grain and stock which you would be able to grow and rear, than ever you have been able to realize from grain and cotton. And then what a change would be affected all around you. Horses, mules, cattle, sheep, and hogs, and in abundance—milk, butter, cheese, honey, and the wheat cake at every house—each family well clothed in the winter and summer from the fleece and cotton of every farm, spun and wove at home! Would you not then indeed be happy and independent? If the temporal blessings of God can ever make a people contented, yours would be that happy lot. But the advantages of such a course of farming would not stop here. The whole appearance of the landscape would undergo a magical change, hardly surpassed by the wonder-working powers of Aladdin's lamp; your old washed and sedge fields, seamed with gullies, would disappear; and your hills clothed in living green, or bending under the golden harvests, would present a scene full of interest. Instead of dilapidated buildings and fences, and perishing orchards, your buildings and fences would be substantial and your orchards flourishing. But you ask me how this would be brought about? The answer is obvious. You would have more time to devote to improvement than you now have. In a course of crops, such as I have recommended, a part of the Spring, Summer, and a small part of the Fall, would be necessary for their culture. Four, five, or possibly six months of every year would be unemployed in your crops, and would be devoted to improvement. Every man will be able to form some opinion of what he could thus accomplish. But this is not all the advantage which you might expect. Land set in grass or cultivated in grain does not require one half the labor which a grain and cotton crop demands. But the money, whence is that to come? is the question in every mind. From your surplus corn, wheat, oats, rye, barley and hay; from your pork and bacon, which you will have to spare, as the result of plenty, wherewith to raise, feed and fatten large stocks of hogs; from your cattle, horses, mules and sheep, raised and fed by your grain and grass! Let your practical Farmers, many of whom I am proud to see at this meeting, compare the results of a grain and grass growing crop, with one of grain and cotton, and the result will be 25 if not 50 per cent. in favor of the former. Will you still persist in old habits, and not at least make a trial of that, which, although perhaps new to you, yet comes thus recommended?

To bring about such results here, and to approximate as near as may be in every other part of the State, how important are Agricultural Societies! They are your lights. They point you to the good: they warn you of that which is bad: they tell you *now*, as they have often done before, that true independence is to be found in the abundance resulting from your farms. Raise, my countrymen, everywhere in South Carolina, your own hogs, sheep, cattle, horses and mules—clothe your own households by the domestic wheel and loom—manufacture your own shoes—supply your own tables with flour, potatoes, butter and cheese of your own crops, herds and dairy, and you can bid defiance to all the tariffs in the world. How much we are tributary, by our own negligence and want of thrift, to the Eastern States, has been lately pointed out most clearly by a gentleman whose zeal in the cause of his country, as well as Agriculture, has not been and will not be surpassed. From his essays you will learn with amazement the immense sums annually paid for butter, cheese brooms, shoes, potatoes and onions, all of which we could easily manufacture or produce at home. Well may we complain of our burdens under such circumstances. A part of them, we have but to will should cease, and like the Pilgrim's burden at the foot of the cross, they will roll off and sink for ever from our view.

The time is now at hand when every South Carolinian must prepare for the deadly struggle, which it is to be feared is soon to take place. The institution of slavery, whether wise or not, it is madness in us to discuss with men who "seeing will not see, and hearing will not hear!" *It is here so interwoven with every part of society, and so essential to life itself, that its destruction would be ours. Its existence and continuance depend upon our agriculture. As long as slave labor is valuable, so long will slave property be cherished. The instant it ceases to be so it will be thrown aside.* Look therefore calmly on the things around you. Your cotton is becoming annually a less valuable crop. Something in the cotton growing country must in part supply its place. May not the economy, which I have already suggested, stand us in great stead in this point of view? And will not the cultivation of provision crops, for which the rice growing country and towns of the seaboard will furnish a ready market, further eke out our wants? I have no doubt, if all South Carolina above the first falls in our great rivers, would become essentially a farming and manufacturing country, that we might, in a few years, vie with even New England To accomplish this, it is necessary that the whole resources of our State should be understood, as well as her industry properly applied. The Geological and Agricultural survey has in part, and will, I hope, fully develope them. All the region of country covered by York, Spartanburg, Union, Laurens, Greenville, Pickens, Anderson, and the upper part of Abbeville, might be essentially improved by the lime which can be obtained from the immense quarries of Limestone to be found in York, Spartanburg and Laurens. To the farmers of the beautiful section of Carolina to which allusion has been made, the lime will afford incalculable riches, when its application to soils and crops comes to be properly understood. Through the Agricultural Survey and the Agricultural Societies, this information will be obtained and disseminated. My belief is, that in the section of country to which I have alluded, the Limestone existing within it, is more than enough to restore its original fertility, and probably to increase it tenfold. To you, then, brother Farmers of the Mountain Districts of South Carolina, there seems to be no ordinary stimulant to excite your industry and direct your efforts to improvement. The earth points to her own bosom, and tells you from it to obtain that which will clothe your fields with abundance, and fill your coffers with a more certain wealth than the mines of Mexico or Peru. In the adjoining Districts, then old Pendleton, the earliest and most successful effort in Agriculture was made by the Farmers' Society. The union of such names as North, Pinckney, Huger, Calhoun, Grisham, Griffin, Maverick, Harrison, Reese, Earle, Whitner and Norton, in such a Society, could not fail to make it useful. Its existence for more than twenty years is the evidence that farmers, when once informed, and acting together, can and will persevere to the attainment of most valuable results. It is an example worthy of all praise, and ought everywhere to be imitated. Here I am glad to see the proper spirit is also at work; and your Agricultural Society, mingling to-day with the State Society, in offering Premiums, points out the beginning of what is to be a glorious day for Greenville! Glorious! because it will confer greater blessings upon her worthy population.

The people of the cotton growing Districts between Laurens Court House and Orangeburg, have not the same means of fertilizing their lands. Still, in judicious cultivation, the application of animal and vegetable manures, they can do much to restore their exhausted wastes. The analysis of cotton and the cotton plant, shows, I am told, that the food peculiar to its nutriment and growth is the *phosphate of lime*, and that this can, in a greater or less degree, be supplied on every plantation by burning the bones, which are cast away as an incumbrance, and applying small quantities of the ashes to each plant. This, beyond all question, deserves the attention of our Agricultural Societies, all of which should unite in requesting Professor Ellet to give to the public his chemical analysis of cotton and the cotton plant, and his observations upon that which is essential in the soil to its growth. Such an act on his part will add another to the many claims of usefulness which he has upon this State. If to this we shall fortunately add, through the Agricultural Survey, or the Agricultural Societies, a correct analysis of our soils, and some hints as to the kind of crops best adapted thereto, I have no doubt that we have the means within our reach of reclaiming our exhausted lands in the cotton Districts above Orangeburg. The application of the Cow Pea as a manure has been often suggested, and will, when properly applied, succeed as well with us as the clover has in more Northern and Western lands. When sown broadcast, and turned under while green, it will furnish a fine vegetable mould for the ensuing crop. On every plantation, however, a little industry will gather from the woods the alluvial deposits, the cow-pens and stables a supply of manure, which will do more to repay labor than can be found in felling the forest and preparing forest land for culture. Here the advice and encouragement of Agricultural Societies become all-important, and here their utility has been so often tested, that it can be only necessary to refer you to the Districts and sections of country where they have longest existed, for the evidence in their favor. The country from Orangeburg to the seaboard, in her inexhaustible beds of marl, has that which will make her lands more productive than they ever have been!

How much there is to encourage us, in every section of the State, is apparent from even these hasty remarks. To Yankee enterprize, could a richer field be opened? Cannot, will not South Carolinians enter upon, possess and enjoy the good which is their own, and which lies open and inviting before them? It is true, it requires labor, perseverance and intelligence; but success challenges and demands these, everywhere. The Clergyman, the Lawyer, the Physician, the Merchant and the Mechanic, must have these requisites to succeed; and still, *with us*, all of these possessions may be found as successful as in any other part of the world! Why may not the Farmer *here* succeed? He can—he may, and he will! It is only to will and determine to be laborious, industrious and persevering in agricultural improvement, and you will be successful. My fellow-citizens, *here* let us make the resolve, that *let others do as they may, we will spare no pains to improve the fair inheritance which God has given us.* It is to be observed in Agriculture, as in everything else, that success does not depend on a single effort; many an experiment must be tried, and tried again. Even success can be improved! The successful Farmer is not the growth of a day. A life of successful and active enterprise does not more than suffice to make such an one. But as in every other occupation successfully followed, every day's improvement and success furnish fresh incentives to other and greater efforts to further improve and succeed.

No higher pleasure, no more innocent and healthful pursuit can be conceived than that of the Farmer. If his own hands hold not the plow, yet in superintending, in witnessing the successful fruits of energy, industry and enterprise, in observing the continued blessing of "seed time and harvest," and the mercy of God in his rich gifts of annual abundance, he finds enough to make his heart sing with joy, and

his head bend in adoring gratitude to the King of kings.

No pursuit can claim a higher antiquity than that of the husbandman; it is hoary with the lapse of ages: it is indeed coeval with man himself. "When the morning stars sang together, and all the sons of God shouted for joy," then began the business of Agriculture.

No occupation can be more honorable. It began with Adam, the father of the human family. It was continued by Noah, the Patriarchal remnant of the antediluvian, and the beginning of the postediluvian world. It has been followed by the virtuous of all ages. It has had, and always will have, a Cincinnatus and a Washington: for in all countries, and especially in Republics, the great body of our rulers must come from amongst the Farmers. It is well that it should be so, not to the exclusion of other employments and professions; but as Agriculture is the chief pursuit, it should have its full quota of the Governors. When looked at in this point of view, how important it is that the Farmer, who may be a Legislator, a General or a Governor, should not only be virtuous, but that he should *be informed*. Such an one is only fit to rule the destinies of a free people. Each and every Farmer should seek all sources of information, through books, societies and intercourse with his fellow man: and then, whether on the farm or in public life, he can feel confident in his acts, as one who has proved "all things," and is determined to "hold fast that which is good."

From the Southern Agriculturist.

FENCES—STOCK—MANURE.

In some parts of the State, timber is becoming so scarce, that it will be a serious question, how we are to provide fences for our fields. Many kinds of live fences have been suggested and recommended. I have never seen one of any great length in any country, that would turn a vicious hog; I have my doubts whether any can be made that may *be relied on*, and I am sure that none can without vast trouble and expense, and many years of unremitted perseverance. Ditches are but little better--being equally unsafe and expensive. What is to be done then? I suggest, that instead of fencing our fields, we fence our *stock*. There are few farmers who have not a mile, many twenty miles or more of fencing to keep up, while a few hundred rails or feet of plank, will fence their stock in securely. The ready objection is, that we can not raise stock without range or pastures. Let us see. It is stated by an experienced breeder that a hog may be kept in a thriving condition on an ear of corn per day. I am sure he may be on two ears. And if they are crushed and boiled, he will fatten rapidly. Seven hundred and thirty average ears of corn will not make over six, or at most six and a half bushels of corn, which will be his yearly allowance--say ten bushels to feed him until eighteen months old. It is a good hog that will at this age, with our common treatment, weigh 150 lbs. nett. If fed in a pen, well watered and supplied with rotten wood or charcoal, which cost nothing, I will guarantee that he will weigh 200 lbs. The pork, therefore, including the cost of attention, will not be but three cents per pound. Do we raise it cheaper now, when we consider that we have to keep so many sows more, than we should on this plan, to ensure a sufficient number of pigs; that we lose so many shotes by the accidents of the range, and that we have to feed thin hogs so bountifully for a month or six weeks before killing? But there are other important considerations. We might with this system keep only the improved breeds, and by such steady feeding secure all the benefit of the improvement which is lost, when we turn them into the woods.

An accurate and very judicious farmer in Virginia, estimates that a hog well littered and properly fed, will make 250 bushels of *good manure* per annum; and hog manure is, we know, at least twice as valuable as stable manure. Now, how much corn will 250 bushels of good hog manure, put upon two or three acres, increase the corn crop? At least twenty bushels—probably much more. Here then you have a return of twenty bushels for six and a half fed, or certainly for ten fed—giving you 200 lbs. of pork, and leaving you ten bushels, to remunerate you for feeding, littering, and hauling out and spreading your manure. At this rate, I am not sure—paradoxical as it may appear—that a farmer would not make by feeding his neighbor's hog for the manure, and returning him his hog when ready for the knife. I am positively sure, that he will find it far more profitable to pen and feed his own, than to give them the best range and pastures.

And now that we *must plant corn largely*, because we *cannot plant cotton* at present prices, I hope the experiment will be generally tried. I believe that the same thing would be true as regards cattle, if the best breeds were selected, a dairy established wherever it is attempted to raise them, and their manure carefully saved. Our winters are mild; cattle standing still require less food than those ranging at will; our shocks, pea-vines, potato and pindar vines, and crab and crow-foot grasses, afford an incalculable amount of forage, which we may secure if our cotton crop is light. And our Indian corn is a treasure for feeding stock, which, in our propensity to imitate everything foreign, and to introduce grasses which our hot and dry summer will not allow to flourish, we overlook too much. It is worth all the grasses in the world. Every inch of it from root to tassel is rich in nutriment; cured and cut, its stalk is equal to sugar beet; and the cob, shock and grain, ground together and boiled, is as good as any equal amount of food known—oil-cake scarcely excepted.

If then we turn our attention to it, we shall find that we can raise stock for our own use, and also for market, *in enclosure*, as well or better than it can be done in any other country; and what a world of rail splitting it would save --of fence making, and fence mending---of corn destroyed and potatoes rooted in despite of all we can do. And how many violent and sometimes fatal quarrels among neighbors would be prevented. Perhaps the most fruitful source of bickering and open war in every neighborhood, is the lawless incursions of stock upon foreign domains. In Europe and in some parts of America, stock are mostly enclosed. On the other continent, there is rarely pretence of a fence or hedge, and in England hedges are of little real use. They would be of none against *our* swine and cattle, which are mostly of the "Liberty Boy" breed.

It may seem premature to talk of enclosing here. I do not think it is. I believe it would be profitable wherever manure is wanted; and I think few will deny that want here. I enclose for profit, though I have to keep fences against my neighbors' stock, the value of which would purchase my meat for five years to come. I invite planters to consider the matter.

HOLKHAM.

From the American Farmer.

ON MANURING IN THE HILL.

It is a deplorable fact that there are many who think they must manage their farms just as their fathers, or even, perhaps, as their grandfathers did; and who believe that to derive the greatest profit from manure, they must "dung in the hill." I propose in this brief article to show, in my feeble manner, that this is not the better way to experience the greatest pecuniary advantage, from the following considerations:

1st. It has been proved by trial that the first crop is invariably smaller where the land is manured in the hill, and if the first is poorer, I suppose there is not the least doubt that the succeeding ones will be. Two years ago last spring, we planted a small field, containing about three acres, with corn and potatoes, manuring the principal part of it by spreading on; we, however, manured about half an acre in the hill, which even had a better soil than much of the other. This was planted and hoed at the time with the other, and in the early part of the season any one would have supposed from the appearance of the potatoes, that there would have been as great a crop where manured in the hill as of those that were the other way. But this was not the case. No: in digging them the difference was very clearly perceived: I should judge that there was not more than two-thirds as great a crop on the part manured in the hill, as on the other part of the piece. Nor is this all. Last year the same field was sowed with oats, and there was as great a contrast in them as in the potatoes of the previous year. This year we have cut two crops of grass on the same piece of ground, which goes to prove none the less the truth of the above assertion. So far as my knowledge extends, I think this to be a correct criterion in all instances.

2d. Potatoes manured in the hill, are, in nine cases out of ten, eaten badly by the worms. I know the worms are a great trouble, even if the manure is spread on, but much more so where it is put in the hill.

3d. Also, where the manure is put in the hill, the potatoes grow too rank in the earlier part of the season, too much of the essential part of the manure is expended in promoting the growth of the tops.

If the manure expends the principal part of its strength in the earlier part of a season, it will not be sufficiently felt in the latter part to cause the potatoes themselves to grow to a good size: but spread on the manure, and it does not relax its agency, but continues to exert itself the whole season.

4th. Corn and potatoes, as well as everything else that is planted where the manure is spread on, will endure a drought much better than if manured the other way. Where the manure is put in the hill, the hill must of necessity be made higher than if it was spread on—and being increased every time of hoeing, it becomes of such a shape that the rain runs off as freely as from a stack of hay, irrigating the ground *between* the hills, and leaving the hills themselves almost entirely dry.

Another reason is, the seed being planted upon the manure, the roots grow too near the top of the ground, so that when there are a few days of dry weather, the ground becomes dry down to the roots, which, as a natural consequence, will greatly injure the growth of the plants. But as I am growing somewhat prolix, I will close this meagre communication by requesting those who have heretofore been accustomed to manure their land in the hill, to try the other way, and I am fully persuaded that they will be richly compensated for the experiment.

LECTOR.

From the Southern Planter.

DECAY OF PEACH TREES.

A singular fact and one worthy of being recorded, was mentioned to us a few days since by Mr. Alexander Duke, of Albemarle. He stated, that whilst on a visit to a neighbor, his attention was called to a large peach orchard, every tree in which had been totally destroyed by the ravages of the worm, with the exception of three; and these three were probably the most thrifty and flourishing peach trees he ever saw. The only cause of their superiority known to his host, was an experiment made in consequence of observing that those parts of worm-eaten timber into which nails had been driven, were generally sound. When his trees were about a year old he had selected three of them and driven a tenpenny nail through the body, as near the ground as possible; whilst the balance of the orchard had gradually failed and finally yielded entirely to the ravages of the worms, these three trees, selected at random, treated precisely in the same manner, with the exception of the nailing, had always been vigorous and healthy, furnishing him at that very period with the greatest profusion of the most luscious fruit. It is supposed that the salt of iron afforded by the nail is offensive to the worm, whilst it is harmless, or perhaps even beneficial to the tree.

From the New York Farmer and Mechanic.

THE HISTORY OF GUANO, FROM DR. GARDNER'S ESSAY.

Among the many surprising discoveries of the Spanish adventurers in America, that of islands formed of the excrement of birds was not the least. The fertilizing power of this new manure, evoking the most extraordinary growth from barren sand, in a climate unvisited by rains, was so worthy of attention, that the earlier writers are full in their accounts of the guano, and speculations on its origin. The Indians knew that it was the excrement of the flammands, cormorants, cranes, and other piscivorous birds that darken the air of their coast. They calculated the supply of manure, and fixed seasons for its removal. The birds were to them providers of food, for their sands could yield none: and hence they looked upon them with so great a reverence, that human life itself was scarcely equal to that of these birds. They called the deposit *huana*, or dung for manuring, and formed from it the verb huanuchani, to manure. But the Spaniards were not equally satisfied of its origin; they had no hesitation in referring the white, recent excrement, to birds; but the dark brown fetid *guano* seemed to be altogether another substance.

Ulloa says—when the depth is considered at which the guano is dug, it appears probable that it is an earth, although the smell might be considered against this opinton; and he is inclined to suppose that a considerable portion of earth is mixed with the birds' dung. Frezier, who examined the coast in the last century, and visited the island of Iquique, (Voy. dans la Mer Sud.) tells us that Indians and negroes are engaged in collecting guano, which is a yellow earth, believed to be the dung of birds from its smell, and the occurrence of feathers at a great depth; but he is overcome with difficulty to account for such accumulations, since, for upwards of one hundred years, there were loaded annually ten to twelve ships, and without any great diminution in its height.

It was, perhaps, this doubt as to the nature of the manure, that led the Spaniards to neglect the wholesome provision of the Incas in respect to the birds, so that now the bustle of ships and boats has driven them away. The discovery of large stores in the earth, under layers of sand, and sometimes clay, seemed to remove the necessity for new deposits; and the recent article, which, in remote times, was almost exclusively used and gathered from the several islands to the extent of 20 to 25 tons the season, is now only procured from such collections as were overlooked by them, or unnecessary to their culture, and will be soon exhausted. The accumulation of recent excrement is extremely slow. "Experience seems to prove," says Humboldt, "that one island will scarcely produce a ship load in a great number of years."

Several of the older deposits, under sand, were also worked by the Indians. The islands of Iquique, St. Lobos, Isla di Guana near Arica, are mentioned by the first writers.

We owe most of our information of the present condition and extent of these deposits to Humboldt and Mr. Winterfieldt, who resided in Peru for a number of years, and published an account in Bell's Weekly Messenger, September 11th, 1841.

Humboldt estimated the range of guano islets from 13 deg. to 21 deg. south latitude—but it certainly extends beyond these limits, for the island of Lobos is as far north as 6 deg. south latitude, and Mr. Bartlett, recently from Peru, states that they extend to the 25th degree south.

The lands about Arica and all along the the coast are extensively manured with it; hence many surmise that the guano will be rapidly exhausted, but it is probable that only a few islands are yet known, for they extend to upwards of fifteen miles from the coast. The beds of manure are usually under sand or drift, and reach various depths, from a few feet to 900 feet, according to some captains. In superficial dimensions they are equally various, from a few hundred feet to upwards of a mile and a half,

The success attendant on the importation of guano into England, gave rise to a mercantile speculation on the part of a company, who have secured from the Peruvian and Bolivian government a monopoly in the sale of the manure, for which they are said to have paid $1,000,000; moreover there is a duty of £3 the ton levied on the export.

The recent excrement is not an article of export, but that which is red or brown. It usually exhales an ammoniacal odour, which sometimes, after heavy dews, becomes intolerably offensive. It is said that at Arica the smell from the neighboring guano islands is sometimes so great as to keep off shipping—and an epidemic is even attributed to it: notwithstanding, the crews of vessels engaged in transporting it are robust and healthy.

It is well understood that the manure is found only along those portions of the coast that are continually dry, and where rain scarcely ever falls. On all coasts similarly situated, the manure will be found; but beyond, even although the birds may be as abundant, no true guano can be expected, but only the insoluble parts.

The coast of Peru is admirably situated, being the boundary of an interminable sweep of the Pacific Ocean, as a resting place for seabirds, where they may form their nests and raise their young; but under these circumstances they are intolerant of any interruption, and leave the islands as soon as an excavation is made for manure.

From the Albany Cultivator.

CHEMISTRY IN COMMON SCHOOLS.

Why not introduce the study of chemistry in all our common schools, at least the rudiments of chemistry, and especially the meaning of chemical terms? Why should not a boy, a farmer's boy, be taught the meaning of oxygen and hydrogen, as well as that of the word water? When he is now told by the papers or books he reads, that *water*, (the meaning of which term he understands very well,) is a fluid composed of certain proportions each of oxygen and hydrogen, (terms he knows nothing about,) he is at a loss. His education has left him with the idea that water is a simple element, as the ancients thought it was; and he also complains of the use of these hard words, when the fact is they are no harder than any other words to learn or to speak; but they are *new* to him, and thence he thinks them hard. All farmers should understand the rudiments of chemistry at least, and as much more as they can command; no one can be a good farmer without this knowledge, except by accident. It is in vain for writers on the subject, to try to use language that can be understood by those who have not learned the meaning of chemical terms. The word oxygen, for example, has no *common term* that would be understood more readily by such people, neither has hydrogen, nitrogen, carbon, &c. See what a list Webster makes in defining these terms. "*Oxygen*—in chemistry, oxygen or oxygen gas, is an *element* or substance so named from its property of generating acids; it is the respirable part of air, vital air, or the basis of it; it is called the acidifying principle, and the principle or support of combustion." "*Hydrogen*—in chemistry, a gas which constitutes one of the elements of water." "*Nitrogen*—the element of nitre; that which produces nitre; that element or component part of air which is called azote." "*Carbon*—pure charcoal; a simple body, black, brittle, light and inodorous." Now, what information will one who does not understand the rudiments of chemistry, derive from these definitions? None whatever. But if chemistry made a part of common education, all these terms would convey a meaning to the reader of them as readily as do those of water, atmospheric air, and charcoal. It is not supposed that the science at large could be taught in common schools; for if it could, there would be no necessity for high schools. All that is intended by these remarks, is to recommend that the meaning of all *chemical terms* should be there taught. For example, the school teacher should teach the scholars the meaning of the word water thus: *Water*, a compound fluid, the elements of which are by weight, eight parts oxygen, and one part hydrogen; by measure, one part oxygen and two parts hydrogen. Oxygen and hydrogen are gases; they are both colorless, having neither taste nor smell. Oxygen gas is heavier than atmospheric air, and it forms a portion of the air itself. It is essential to animal life and combustion. Hydrogen gas is the lightest of all gases, and hence is used in filling balloons; being about sixteen times lighter than oxygen. Now if such instruction was given in schools, there would be no complaint of the use by writers of hard names, hard words, &c.; and farmers would know just as well what was meant by the words calcareous earth, gypseous earth, &c., as they now do of the meaning of marl, plaster of Paris, &c. I can see no more reason in restricting the education of boys to the common place words of our language, in our common schools, than I do in confining them in their farming operations to the old common place routine of practice. Their education should be such as to fit them for the profession they are to follow, let that be what it may. Chemistry and botany are as essential elements of an agricultural education, as any others whatever. But how few are there amongst us who know even the meaning of the most common terms of either scie..ce? S.

LIMING LAND.

In the application of lime to land, it seems to me that one great object is generally overlooked. All the lime intended to be applied in one season is generally spread at once, thus leaving it in a kind of stratum, instead of being, as it ought to be, thoroughly mixed with the soil. Would it not be better to proceed as follows: Suppose you intend to apply sixty bushels to the acre. First spread twenty bushels carefully over the acre of ground; then turn the soil with the heaviest, or rather deepest operating plow you have. Then spread twenty bushels more in the same way, and turn that in with a medium plow passing across the previous furrow. Then spread the remaining twenty bushels and harrow that in, or turn it under with a light seed plow. This would effectually mingle the lime through the whole depth of the soil. Any one can see the reason of the thing and the advantages of it; the only object of it being the labor; but that is not more than is requisite to bring the soil into the proper condition for seeding. If wheat or any small grain be intended, then the third application can be made at the time the seed is sown. I do not much like the usual plan of applying thirty bushels one year, and three or five years thereafter thirty bushels more, and so on, unless deficiency of means prevents the whole being applied the same year. The idea generally is, that, like manure, the first application is exhausted or nearly so in three or five years, and that then another application is necessary. I do not think the lime is exhausted, but the small quantity applied having been diffused through the whole of the soil by successive plowings, the soil is not sufficiently calcareous. Now if we apply the whole quantity as suggested above, the soil to its entire depth will have become charged with it; and, if enough is applied I do not believe it will be exhausted in twenty years, if then.—*Alb. Cult.*

From the Louisville Journal.

JERUSALEM ARTICHOKES.

What we have already published in regard to these roots, ought to be sufficient to induce every farmer to give them a trial. Dr. Martin, of this state, a high authority, recommends them, after long experience, as far superior to any other root both for hogs and sheep. It is stated that they will yield on an average three times as much as the Irish potato.

Mr. D. McMillan, of Livingston county, left word at our office, says the Genesee Farmer, that he lost seventy sheep last month by turning them into wheat stubble and young clover immediately after harvest; and he wishes to know the cause of the disease.

WEDNESDAY, OCTOBER 31, 1844.

To Correspondents.—We welcome with unfeigned pleasure, the contribution of S. B. to our columns, and indulge the hope that he will find frequent occasion hereafter to enrich them with the results of his investigations in the science of Agriculture.

"A Georgia Overseer" is received, and will obtain a place in our next.

Houston County Agricultural Society.—We owe an explanation to our Houston county friends for the delay in the publication of their proceedings. The manuscript happened to get misplaced, and was consequently forgotten, until in one of our researches a few days since, it was found. In future, we trust, the same or any like mishap will not occur.

The Markets—Cotton.—Now that the business season has fairly opened, we shall resume in our next, the reports of the markets; and from time to time, we shall endeavor to present, for the consideration of our readers, some reflections in reference to the future policy to be adopted by the growers of our great staple. That something must and should be done to secure a better price for the cotton crop, is becoming more and more apparent; and that this object can only be accomplished by a diminished production, is equally apparent to the most casual observer. We grow entirely too much—the consequence of which is, that every market in the world is largely overstocked now, which must be greatly increased by the crop now coming in, which promises to be the largest ever grown in the United States. The only corrective therefore for this state of things, is a diminished production, which will enable our planters, by a just and prudent division of their labor, to cultivate other crops, while if only one half the cotton is produced, the planter will obtain for it a greater amount of money than he now obtains, with such an over-production. It is worse than folly to attempt to remedy the low prices of cotton by making more; for we now make more than the whole machinery of the world can possibly consume. Designing to recur to this subject hereafter, and to treat it more in detail, we merely throw out these hints now, for the purpose of warning our friends in advance of the suicidal policy of increasing their crops of cotton, that they may in time prepare for the necessary changes in their system of agriculture.

☞ The Danvers Eagle mentions a remarkable apple-tree, which has been in continual bloom since last spring, and has now on it apples of five different growths, and is still blossoming.

New Cabbage.—The Albany Cultivator chronicles a new variety of this plant, called the Roman cabbage, and says:—"The variety seems to possess some peculiarities. It is more solid, and heavier in proportion to its bulk, than any we have seen. It also grows very quick. The head shown us, weighed twenty pounds on the 20th of July. Its shape is oblong, and much pointed at the top. It is said to keep better than any other cabbage. The seed was brought into the country by some Germans."

☞ It is said that charcoal is a remedy for rust on the gooseberry.

☞ The rot in the potatoe, so remarkably prevalent this year at the North, is exciting considerable attention, and we see many articles in our exchanges relative to the cause—but nothing very satisfactory has yet been elicited, in our opinion. It seems most generally attributed to wet weather, at an unfavorable period in its growth. Others attribute it to *fungi*, or insects.

☞ The Agricultural Fairs, Cattle-shows, and Horticultural exhibitions, this year, are highly creditable to our more northern farmers.

☞ If you desire to be rembered and *honored* by posterity, says the Maine Cultivator, plant a few trees each year around your premises. It is the *sine qua non* of patriotism—a "good" that will survive when you are gone, and embalm your memory.

Speaking of the economising of manures Hannam says:—"Nothing must be allowed to run away in the form of a fluid, or to fly away in the disguise of a smell." These few words embody more wisdom than we often find in a lengthy essay.

In Westchester Co., N. Y., the disease in the potatoe is general. On Long Island, on heavy ground the rot is prevalent, but in light sandy soils, they have escaped. The continued wet weather is assigned as the cause by the Long Island Farmer.

Ventilation and cleanliness are very important helps to economy in the feeding of all animals. Shelter and warmth will do harm, if free and pure air is not admitted to the fattening stock. The same is true of cleanliness, so favorable to the health of all animals. The cleaner their houses and skins are kept, the more they thrive under any given form of treatment in other respects.—*Johnston.*

From the Galena Gazette.

WOOL:

The history of the growth of wool is very curious. Fifty years ago, not a pound of fine wool was raised in the United States, in Great Britain, or in any other country, except Spain. In the latter country, the flocks were owned exclusively by the Nobility, or by the Crown. In 1794, a small flock was sent to the Elector of Saxony, as a present from the King of Spain, whence the entire product of Saxony wool, now of such immense value. Before the breaking out of the last war between this country and Great Britain, Col. Humphreys succeeded in getting a few Merino sheep brought out of Spain, though their exportation was prohibited under penalty of being sent to the galleys for life.

In 1809, during the second invasion of Spain by the French, some of the valuable Crown flocks were sold to raise money. Our Consul at Lisbon, Mr. Jarvis, purchased fourteen hundred head, and sent them to this country. Previously, however, Mr. Livingston obtained a few sheep of the Spanish breed as a present, in 1792. A portion of the pure unmixed Merino blood from these flocks is to be found in Vermont at this time. Such was the origin of the immense flocks of the fine woolled sheep in the United States and Great Britain.

From the Boston Bee.

INDIVIDUAL EFFORT.

Every thing is accomplished by it—no great reform or plan for the improvement of mankind was ever originated and carried forward, save by individual effort. The masses never start up in a body and adopt this or that mode of reform, moral or political—there must be a pioneer, a leader, one to start the thing; and after him many more to put their shoulders to the work *individually*. When impressed with the truth of a thing, we should not wait for our neighbor or neghbors to think as we do, before putting our thoughts in practice—we should go right about it, do as we think is just and right, regardless of the opposition and sneers of those whose habits and prejudices run counter to it remembering that "example is better than precept," and that "actions speak louder than words."

Many people, however deeply the necessity of reform or improvement may be felt by them, have not the courage to encounter difficulties by acting up to their sense of right, especially if the sense of right be opposed to the habits and prejudices of those around them. What can I do, they say, (or think,) with so many opposed to me? But in this they make a great mistake—millions are counted by beginning with an unit, and by individual effort the most stupendous undertakings are carried forward to successful issue. In political matters, we are frequently told of how much has been accomplished by a single vote, and the fact has been over and over again proved that the most simple and apparently unimportant act of our lives has exerted the greatest influence, not only over them, but on the destinies of others. We cannot calculate the amount of good or evil that flows from the neglect or use of individual effort. Often times the neglect of doing what we know to be right, is productive of more evil than a positive wrong. We are therefore called upon to do whatsoever our reason teaches us to be right, as well as to abstain from what we know to be wrong.

Every man should feel that he is individually responsible for his acts, and that because others do what his judgment teaches him to be wrong, it is no excuse for him supinely to follow in their track. Every man should think for himself, and so thinking should *act*. In political matters, his vote should be given according to the dictates of his judgment, regardless of how others vote around him—it is his privilege, the sign of his freedom, and he knows not how much, in the aggregate, may depend upon this individual exercise of his will. In morals, in religion, it is the same. The individual is accountable, and he should never forget the responsibility that attaches to him, or fancy that the humbleness of his situation in life deprives him of the rights and privileges of manhood, or exempts him from a performance of the duties belonging thereto. In a moral or political point of view, we are all equal, and the most important results may (and more frequently do) hinge upon the actions of a poor man, as well as upon those of his richer neighbor. Let us never forfeit our independence and manhood by supineness or fawning or forget how much may be accomplished by individual effort.

USEFUL RECIPE.

I send you below, Messrs. Editors, a recipe for making a composition which will render wood entirely incombustible. It is very simply prepared, and quite easy of application, being used the same as paint with an ordinary brush. A good coat of it applied to the floor under the stoves would be an excellent precaution.

Take a quantity of water proportioned to the

surface of wood you may wish to cover, and add to it as much potash as can be dissolved therein. When the water will dissolve no more potash, stir into the solution, first a quantity of flour paste of the consistency of common painter's size; second, a sufficiency of pure clay to render it of the consistency of cream.

When the clay is well mixed, apply the preparation, as before directed, to the wood; it will secure it from the action of both fire and rain. In a most violent fire, wood thus saturated may be carbonated but will never blaze.

If desirable, a most agreeable color can be given to the preparation by adding a small quantity of red or yellow ochre.—*Buffalo Com. Advertiser.*

From the Philadelphia Saturday Courier.

PRESERVATION OF APPLES.

A gentleman from the northern part of Indiana recently communicated to us a fact in regard to the preservation of apples, which will be new to many of our readers, and valuable to all farmers. He says, that, to keep apples from Autumn to June, he places them in a shallow hole, dug as for Irish potatoes, having covered the bottom with corn-stalks or straw, and the straw with dirt to the depth of five or six inches. No shelter is placed over them. As soon as the severe weather arrives, and the ground, and perhaps the apples themselves, become thoroughly frozen, straw is again placed over the frozen heap, and the whole again covered with a coating of earth,—this time ten or twelve inches thick.

The object is to keep the first coating of earth frozen until spring, and then to cause it to thaw very slowly.

The same treatment may be given to turnips, Irish potatoes, beets, and carrots. Any of these roots may be thoroughly frozen without injury, provided they are then covered well over, and suffered to thaw by slow degrees.

Sweet potatoes are almost the only exception among roots to this rule. They are injured by a small degree of cold, and without being frozen. It is only the sudden thawing that causes the dissolution of the apple or potatoe that has been frozen. If in the frozen state, an Irish potato is put into cold water, until the frost is out, and is then cooked, it will be as good as if it had never been frozen. All these are facts, which we know from our own experience, and that of many others.

Great Yield of Pumpkins.—Chas. L. Pierce, of this town, raised the present year from a single seed, 15 pumkins weighing 384 lbs. The largest weighed 31½ lbs., and the average of the whole was 25½ lbs. each. The vine, including all the branches, measured 635 feet in length.—*Wor. Spy.*

A Hint.—Don't suffer your revolving hay-rake, and your wagon rack, and hand rakes, and whatever else you have used in the haying and harvesting just finished, to lie out in the fields exposed to the weather, but see them well housed for another season. The weather destroys more tools than hard work, with some farmers; and more valuable time is lost hunting up and repairing lost implements, than their original cost.—*Albany Cultivator.*

CUTTING TIMBER.

Mr. Buckminister,—*Sir:* One fact I wish to state with regard to the time to cut timber. I am satisfied from actual observation, that timber cut in the month of June, and perhaps July, will last twice, if not four times as long, either under or above ground, as that cut in winter, and it will not powder post.

Yours respectfully,

West Newton, July 13, 1844. John Stimson.

[There are many causes that tend to prove June a better time than winter to cut timber. The bark must be pealed immediately to let off the sap, or timber cut in June will rot as fast as any other.—*Ed. Mass. Plough.*]

AUGUSTA PRICES CURRENT.

			Wholesale.		Retail.
BAGGING, Hemp	₩ yard		16	@	20
Tow	" "		15	@	18
Gunny	" "		20	@	22
BALE ROPE	" lb.		9	@	10
BACON, Hog round	" "		6	@	7
Hams	" "		7	@	10
Shoulders	" "		4	@	6
Sides	" "		6	@	7
BUTTER, Goshen	" "		20	@	25
North Carolina	" "		10	@	15
Country	" "		12	@	20
COFFEE, Green prime Cuba	" "		8	@	10
Ordinary to Good	" "		7	@	9
St. Domingo	" "		7	@	8
Rio	"		8	@	10
Laguira	" "		9	@	10
Porto Rico	" "		9	@	10
Java	" "		13	@	15
Mocha	" "		20	@	25
CANDLES, Spermaceti	" "		34	@	37½
Tallow	" "		12	@	18
CHEESE, American	" "		8	@	12½
English	" "		none.		
CIDER, Northern	" bbl.	7 00	@	8 00	
in boxes	" doz.	3 50	@	4 50	
CIGARS, Spanish	" M.	15 00	@	20 00	
American	" "	5 00	@	12 00	
CORN	" bush.	45	@	50	
FISH, Herrings	" box.	75	@	1 25	
Mackerel No. 1	" bbl.	13 00	@	14 00	
" No. 2	" "	10 00	@	11 00	
" No. 3	" "	8 00	@	9 00	
FLOUR, Canal	" "	6 00	@	7 00	
Baltimore	" "	5 50	@	6 00	
Western	" "	5 50	@	6 00	
Country	" "	4 00	@	5 50	
FEATHERS	" lb.	25	@	30	
GINGER	" keg.	10	@	12	
GUNPOWDER	" "	6 00	@	7 00	
Blasting	" "	4 00	@	4 50	
GLASS, 10 × 12	" box	3 00	@	3 50	
8 × 10	" "	2 50	@	3 00	
IRON, Russia	" "	5 00	@	5 00	
Swedes, assorted	" cwt.	4 50	@	5 00	
Hoop	" "	7 00	@	8 00	
Sheet	" "	00	@	8 00	
Nail Rods	" "	7 00	@	8 00	
LEAD	" lb.	6	@	7	
LEATHER, Sole	" "	15	@	23	
Upper	" side	87	@	2 00	
Calf Skins	" doz	12 00	@	26 00	
LARD	" lb.	8	@	10	
MOLASSES, N. Orleans	" gal.	30	@	37½	
Havana	" "	28	@	31¼	
English Island	" "	none.			
NAILS	" lb.	4½	@	6	
OILS, Lamp	" gal.	1 12	@	1 25	
Linseed	" "	1 10	@	1 25	
Tanners	" "	55	@	62	
OATS	" bush.	37½	@	50	
PEAS	" "	62	@	75	
PAINTS, Red Lead	" lb.	12	@	15	
White Lead	" keg	2 00	@	2 50	
Spanish Brown	" lb.	4	@		
Yellow Ochre	" "	4	@		
PEPPER, Black	" "	12½	@	15	
PORTER, London	" doz.	3 50	@	4	
and Ale, American	" bbl.	8 50	@	9 00	
RAISINS, Malaga	" box	3 25	@	3 75	
Muscatel	" "	2 00	@	2 25	
Bloom	" "	none.			
RICE, Prime	" cwt.	4 00	@	5 00	
Inferior to Good	" "	1 75	@	2 50	
SUGAR, New Orleans	" lb.	7	@	9	
Havana, white	"	11	@	12	
" brown	" "	8	@	9	
Muscovado	" "	7	@	9	
St. Croix	" "	8	@	11	
Porto Rico	" "	7	@	10	
Lump	" "	13	@	14	
Loaf	" "	13	@	15	
Double refined	" "	14	@	16	
SPICE	" "	16	@	18	
SOAP, American, No. 1	" "	7	@	9	
" No. 2	" "	5	@	7	
SALT, Liverpool ground	" bush.	45	@	50	
" "	" sack	1 75	@	2 00	
STEEL, German	" lb.	15	@	16	
Blistered	" "	8	@	12½	
SHOT, all sizes	" bag	1 62½	@	1 75	
SPIRITS, Cognac 4th proof	" gal.	2 00	@	2 50	
Peach	" "	1 00	@	1 50	
Apple	" "	37½	@	50	
Gin, Holland	" "	1 25	@	1 50	
" American	" "	40	@	50	
Rum, Jamaica	" "	1 50	@	2 00	
" N. England	" "	35	@	40	
Whiskey, Northern	" "	33	@	37½	
" Western	" "	31	@	37½	
" Mononga	" "	75	@	1 00	
" Irish	" "	2 00	@	3 00	
TOBACCO, N. Carolina	" lb.	18	@	15	
Virginia	" "	15	@	40	
TWINE	" "	20	@	30	
TEA, Pouchong	" "	75	@	1 00	
Young Hyson	" "	30	@	1 25	
Hyson	" "	80	@	1 25	
Gunpowder	" "	1 00	@	1 50	
Imperial	" "	1 00	@	1 50	
VINEGAR, Cider	" "	25	@	37	
Wine	" "	50	@	75	
WINE, Madeira	" gal.	2 50	@	3 50	
Sicily Madeira	" "	1 00	@	1 50	

CONTENTS OF THIS NUMBER.

Communications.

Economy 169
Overseers ..... 169—170
Houston County Agricultural Society 170

Selections, Extracts, &c.

An Address, delivered before the State Agricultural Society at Greenville, by John Belton O'Neal ..... 170—173
Fences, Stock, Manure 173
On Manuring in the Hill 173
Decay of Peach Trees 173
The History of Guano, from Dr. Gardner's Essay 173
Chemistry in Common Schools 174
Liming Land 174
Jerusalem Artichokes 174
Editorials, etc.—To Correspondents; Houston County Agricultural Society; The Markets—Cotton; New Cabbage; Potatoe Rot, etc 175
Wool; Individual Effort; Useful Recipe 175
Preservation of Apples 176
Augusta Prices Current 176

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SOUTHERN CULTIVATOR.

VOL. II. AUGUSTA, GA., NOVEMBER 13, 1844. No. 23.

For the Southern Cultivator.

OVERSEERS.

MR. EDITOR:—There have recently appeared several articles in your paper, containing remarks, observations and strictures, with regard to the manners, the intelligence, and the capacities of Overseers, for the proper management of a Cotton plantation.

Being but an overseer myself, and having but little time and less inclination "to appear in print," though even under a "*nom de guerre*," I have waited patiently to see some reply to those communications, from a Georgia overseer.—Desparing of a proper answer, I take upon myself (by your good leave) to tell you "where the axe is wanting, at the root of the tree of evil."

All men are actuated by interested motives. Some are willing to sacrifice something towards the public weal—some, nothing at all.

Admitting the above axiom to be true in general, I shall proceed to show, that the present generation of Overseers, do as their employers do, (or rather as they *think* they do,) and therefore that it is unreasonable to expect them to turn from "the errors of their ways," until it is made their interest so to do.

But, waiving all further reasoning upon the subject, I will endeavor to come to the very gist of the subject—or the very sum and substance thereof, as we overseers say.

And first, Mr. Editor, allow me to introduce you to Col. Cottonbags—(for, sir, our farmers pride themselves upon being Captains, Colonels, Majors, and Judges, far above the honor of being the President of an agricultural society,) and an Overseer.

Overseer.—Ahem! (After the usual salutation about the Colonel's health, that of his family, &c:)—Colonel, have you engaged an overseer for next year?

Colonel.—No, sir, I believe not, (considerable pause.) I don't believe my overseer and myself can agree for next year: *he wants too much*; and times are so hard, and cotton so low, that I for *one* am determined to give no more such prices as I have been giving.

Overseer.—(Somewhat embarrassed.) What did you give him, Colonel?

Colonel.—Why $350, and found his family in sugar and coffee, and food for his horse, equal to $150. 'Tis too much, sir, too much sir, I can't stand it.

Overseer.—(Considerable pause.) How many hands do you work, Colonel?

Colonel.—Thirty odd.

Overseer.—How much in cotton?

Colonel.—About 550 acres.

Overseer.—How much in corn.

Colonel.—One hundred and fifty acres.

Overseer.—Do you raise your meat?

Colonel.—Why no, and there's the devil.—From bad management, or *something else*, I shall have my meat to buy; and what with *that*, and bagging, and rope, and negro clothes, and shoes, and other expenses, I shall hardly make more than enough to pay my overseer.

Overseer.—Have you any sheep?

Colonel.—No, sir; I was once fool enough to try *that* northern experiment, and I found to my cost 'twas a foolish one.

Overseer.—How so?

Colonel.—Why, I bought 25 head, some four or five years ago, and last year I found I had no more than I commenced with; and so I sold the things last winter, and am glad *that* trouble is off of my hands.

Overseer.—That's strange! I was at Dr. Robert Williams's yesterday, and he told me he found it very profitable raising sheep. He says, besides the mutton which his flock affords his table, the wool he sends to the factory and has manufactured into cloth for his negroes. The quantity of wool he has left after supplying his own wants, more than pays the expense of manufacturing the article.

Colonel.—Oh yes, I know the Doctor, he's one of your experimenters, full of projects and notions. But how much cotton does he make?

Overseer.—He says he tends as much to the hand as most of his neighbors; and was telling me that he raised a full supply of meat, and always had a plenty of peas and other vegetables for his negroes. He also informed me yesterday, that he was going to make a sugar-mill, and would try and make his own sugar, but at any rate a plenty of syrup this year.

Colonel.—Yes, another foolish project of the Doctor's. That, sir, has been sufficiently tried here and has proved to be a failure.

Overseer.—Have *you* ever tried it, Colonel?

Colonel.—No, but others have, and they say it takes too much time.

Overseer.—How's your pea crops, Colonel?

Colonel.—I never plant peas, sir; they kill more hogs than they raise.

Overseer.—That is strange! The Doctor told me his peas nearly fattened his hogs before he penned them, besides gathering near 150 bushels for seed, for sale, and for food for his negroes.

Colonel.—Well, I don't know how he manages. It takes all my time to gather my cotton, and I am till March at that. But, sir, the long and the short of it is, Dr. Williams is no pattern of a farmer for me. I know some things as well as he does.

Overseer.—(Smiling.) That's just what he says of you.

Colonel.—He does, hey! Well, we'll see who who *makes most clear money.*

Overseer.—(After considerable pause.) Have your negroes been healthy?

Colonel.—Quite the contrary; we lost considerable time by sickness, which caused us to "get in the grass." The negroes are so lazy, they don't half cook their victuals; and that's what makes them sick so much.

Overseer.—You don't have it cooked for them yourself, then?

Colonel.—Not I! I tried that project once, too. But they were so difficult to please, that I broke it up, and now make them cook of a night.

Overseer.—The Doctor told me he preferred cooking for his hands, for *that very reason*, for he says by cooking vegetables with their meat, it goes much farther, is more conducive to health, and a great saving in time, to say nothing of the comfort of warm food, instead of cold half cooked stuff.

Colonel.—Well, the Doctor may do as he pleases. I shan't give myself so much trouble. They may cook it or let it alone, and be —— for what I care. You appear to have taken a great notion to the Doctor. Why did you not get in with him?

Overseer.—Why, to tell you the truth, the Doctor asked me so many strange questions that I could not answer to his satisfaction, that he said he was afraid I would not suit him. I have generally been in the habit of only being asked by my employer, "how many bags we made to the hand." And as you say, all that stuff about corn, peas, potatoes, vegetables, raising hogs, sheep, goats, cattle, mode of farming, different qualities of soil, ditching, planting rice, (for he makes considerable rice, too,) and about currying horses, the time and manner, and the quantity of salt, ashes and copperas to be given to all those animals, that I confess I was non plussed.

Colonel.—(Laugh on the Colonel's side.)—Well, I'll not pester you as the Doctor did about all his notions. I know my own interest best.

As I do not desire to occupy too much space in your valuable paper, I will here close the dialogue, by adding that the overseer, having produced to the Colonel satisfactory testimonials from his late employer, that he made 8 bags to the hand, and would have made 10 had it not been for the "shedding in consequence of the drouth," engages with him for the next year—the overseer agreeing to take less wages than the Colonel had been giving. Where you find one Dr. Williams you will find twenty Col. Cottonbags; and I ask you, sir, is the picture exaggerated? If

not, is it not clear that as 20 is to 1, in the same proportion must and will be the number of overseers whose greatest boast will be (their interest guiding them) "the number of bags made to the hand."

I perceive with pleasure (though but an overseer) that the spirit of improvement in agriculture, is daily spreading in Georgia, and trust, with the aid of your valuable paper, that the day is not distant when something like the following questions will be asked an overseer, previous to employing him:

Who did you live with last year?

Does he take the Southern Cultivator?

Do *you* take that paper?

How many men worked in the field?

How many women worked in the field?

How many boys under 14 years of age?

How many women had chi'dren that year?

Did any of those children die?

Were the negroes generally healthy?

How much pork did you raise for sale, besides your own consumption?

How much corn?

How many bushels peas; do. potatoes?

How many acres of turnips?

How much small grain did you house?

How many pounds of wool?

How many beeves did you kill; and did you save all the hides?

How many acres did you cultivate to the hand?

How many acres to each horse and plow?

How many acres did you manure; and in what manner; and of what sort; stable or marl, and what quantity to the acre?

Time and manner of cultivating the various products of the farm?

Let a man be also asked *his reasons* for the success or failure of a crop.

You will confer a favor, Mr. Editor, by giving statistical information on the following heads, besides others which may suggest themselves to your mind.

What is the number of male slaves in each county of the state? Do. females?

What is the number of boys under 14 years of age, in each county of the state? Do. girls?

If possible, number of cotton plantations, with number of acres planted. Number of acres corn planted. Number acres of wheat and other small grain. Number of horses, mules, cattle, hogs, sheep and goats.

Amount of export, and the various articles. Amount of import, and the various articles.

Manufactures, founderies, &c.,—with prices annexed to exports and imports.

Number of agricultural societies in the state. Number of persons who take the Southern Cultivator.

Should this communication prove acceptable, it furnished the above statistical information—you may again hear from,

A Georgia Overseer.

Florence, Stewart Co.

Married Men.—The more married men you have, says Voltaire, the fewer crimes there will be. Examine the frightful columns of your criminal calenders—you will there find a hundred youths executed for one father of a family. Marriage renders a man more virtuous and more wise. The father of a family is not willing to blush before his children.

From the Transactions of the N. Y. State Ag. Society.

ON THE IMPROVEMENT AND PROFITABLE CULTIVATION OF CLAY LANDS.

[Remarks of John P. Beekman, President at the Columbia County Fair.]

Fellow-Citizens:—The third exhibition of the Fair of the Agricultural Society of Columbia is ended. We have now met to receive the usual address, and then to distribute the several prizes to which that exhibition has led, to those who have just won them. Here our labors, as a Society, for the year are closed; but I trust, to be individually renewed, with increased exertion, and better success for the future. Competition, such as this Society engenders, cannot but be useful to the Farmer; for here he has the evidence of the skill of his neighbors before him, and if he will not profit by the lessons these teach him, depend upon it, he is not a man for times like these.

The march of society is onward, and more has been done in the last forty years for the improvement and happiness of mankind than in many centuries before. The life of the Farmer is that of constant exertion, but when his labors are rewarded and his hopes cheered by fruitful returns, and all the comforts that necessarily follow, he will look back with pleasure on the past year that has ensured him the reward of his toil. This gratification is not lessened by a feeling of independence that springs from well-conducted efforts, nor by the estimation in which he sees himself held by an intelligent community. Under such circumstances, he proceeds with renewed energy to his work; and whether by the evening-fireside or under an August sun, he feels the same buoyancy of spirits, the same ardent desire to press forward its execution.

Seed-time and harvest, summer and winter, follow each other in quick succession, and so do the seasons of our lives: but when our summer is gone and winter is come, we will at least have the consolation to think that our lives of industry and sobriety have not shortened our days or lessened our enjoyments—and that old age will find us with no premature infirmities, with a reputation well established, and a competence to support declining years.

If the life of the farmer is a life of toil it is a life rich in the comfort it affords, and richer still in the independence which springs from it. He lives not alone for himself—he lives for the benefit of mankind. No country can prosper without him, no government exist without him; he is the lever that sets in motion all the elements that conduce to the existence, comfort and happiness of man. He has cleared your forests, made your roads, furnished the materials for building our villages and cities. He builds your school houses, erects and supports three-fourths of your temples of worship; and if education, civilization, religion, or good government is to be settled or promoted, you are sure to find in him a firm and steady friend. Generally kind and humane, the poor have in him a friend on whom they can depend; and its habits of industry, sobriety and morality, ensure stability to republican government, and furnish examples upon which the lives and habits of the rising generation are formed. The product of his industry supplies us not alone with the materials for trade; but on him, under Providence, we depend not only for existence, but for the thousand comforts that follow from labors so bountifully blest by our Maker.

To encourage this man in his great work, we have met this day; and if aught we have said, or can say, can add to his wealth, intelligence, respectability or usefulness, we have long since been repaid a thousand-fold in the benefits he has conferred upon this whole community. Last year, fellow-citizens, when I had the honor to address an audience like this, the principal subject of remark was upon the construction of the plow, and the necessity of good and careful plowing to increase our just expectations for ample returns for our labor.

The subject to which I would now call your attention is, the improvement and profitable cultivation of our clay lands.

It is not necessary, on the present occasion, that I should go into a close analysis of the different kinds of soil, but to state that the lands in this section of the State are composed principally of flint, lime and alum, or in other words, clay. The best lands for arable husbandry have a proper mixture of those three ingredients; and when they are so blended, they constitute a soil that admits of the most profitable cultivation.

In some parts of our State they are so mixed; but this is the case in a small portion of our extensive country. Here we must take things as we find them; and as in this section, for many miles up and down the Hudson river, but not more than a mile or two in width, we find a streak of clay bounded on the west principally by a streak of sand; on the east by one of flint or gravel; it becomes us to inquire whether anything can be done with this clayey portion, which is now our poorest land, to reclaim it, and make its cultivation more profitable. Chemists tell us that the most profitable lands are those which are composed of three-eighths of clay, three-eighths of pulverized limestone, and two-eighths of sand, or about this proportion; and an excellent soil for wheat is composed of three-fifths of sand, two-fifths of three earths, lime, flint and clay. I do not use chemical terms in speaking of these earths. I use only the English words, that I may be easily understood, for the object of this address is to be practically useful. I wish then, that you would bear in mind that it is the proper mixture of these ingredients, clay, sand and lime, that constitutes our most fertile soils; and it follows that, when either of these three substances is in more than due proportion to the other, or the earth is entirely composed of the one, so sterility proportionately as necessarily follows. It is not alone agricultural chemists who have made these observations, but our best farmers have long since discovered that a soil judiciously mixed, if I may use the term, is the most congenial to the easy and profitable culture of all grasses, grain and fruits.

One of the most noted chemists, Berghman, tells us, as corroborative of the preceding remarks, that these three earths enter into the composition of plants, or in other words, plants are made from them in different proportions; and he tells you how much of earth enter into the composition of wheat, oats, barley, rye, potatoes and clover.

It therefore admits not of a doubt—because the man of science and the practical farmer, unknown to each other, and by different modes of reasoning, bring the results of their respective observations to the same point.

The one tells us that these three ingredients, lime, sand and clay, constitute the best land; and the other tells us, that he finds by analysis, that these several soils enter into the composition of the plants themselves. So far, all is right. Now, what practical deductions can be drawn from the above facts? Plants, we all know, derive their nourishment from the soil they stand in, and the air by which they are surrounded. If the soil which they stand in does not admit of an easy egress of the roots of the plant through it, and likewise afford it that food most congenial to its growth, the air by which it is surrounded can do little to bring it vigorously forward.

Clay, unmixed, we know, becomes hard by heat; and it is of such quality, that the admixture of water with it makes it unpleasantly adhesive. In summer, therefore, it is apt to become dry and hard; and in spring and fall or wet weather, too tenacious of water and holds it too long for plants to thrive in. Our object is, therefore, to prevent it from baking in dry weather, and in wet to permit the moisture to pass through it, that neither excess may be injurious to the growing plant.

There is a single remedy and a simple remedy for all this; and that is, to follow up our first suggestion, confirmed by both the philosopher and farmer. Open and mix the soil, so that the roots of plants pass freely through it, and the

water likewise. How is this to be done? By drawing on what it is deficient in--lime, flint or sand. Either of these will open the soil, and answer the purpose. Manure will do the same thing, but it will not be so permanent; so will the plowing in of either green or dry crops, or chips, or stones, or leaves, or any thing that will open the earth and the progress of the roots of the plants.

A friend in an adjoining town, Claverack, tells me that these suggestions some time since occurred to him; and having the opportunities, he has adopted the practice of flooding a clay lot by a muddy stream, rendered turbid by sand in rainy weather when it is swollen; and by letting the water pass over it in this state, he has had deposited over it within a few years, hundreds of tons of sand and gravel, and it has since produced him the greatest yield of hay he has ever had.

If I understand him right, he has recovered several acres in this way, and has already been more than a hundred times compensated for the expense of the plan he has adopted. He has so managed as to dam or prevent the water from passing off at those times, until it had made its deposite: and when it had, he opened the sluices and let it pass off. The labor and the expense were trifling, but he reaps the benefit of the thought, and deserves our thanks for adopting it.

Another friend tells me, that he has drawn sand from a neighboring hillock, on a lot of clay land: and in the crops that followed, it produced as good an effect as if the land had been highly manured. The first crop upon it, after making the experiment, was a crop of grass; and he was so pleased with it, that he earnestly persuaded all he could to visit and satisfy themselves by their own personal observation. A third friend tells me, that he summer-fallowed a poor, worn-out clay lot in 1842, intending to manure it and sow it to wheat in the fall. He plowed it and drew on a sufficiency of stable manure. On another portion he drew sand and gravel, and spread it. Another portion, he left unmanured and unsanded. He sowed the whole to wheat. In the summer of 1843, the past summer, the part manured was very good, the part sanded equally good, and on the part to which neither had been applied, the wheat was miserably poor. These three experiments all tend to the same result, and to confirm the theory of the philosopher and the observation of the farmer.

The clay land in Columbia county was known by our oldest inhabitants to yield large crops of wheat immediately after clearing. Indeed, it was thought that none but clay land would produce wheat. The farmers therefore, who owned other soil, bought these clay lands solely with a view to raise wheat; and I have been repeatedly told by an old inhabitant, that farmers would purchase detached lots of clay, distant from their farms, if they had no land of this kind, for the express purpose of raising wheat. This was soon after or before the timber or growth of the forest was removed, where the ground for centuries had been annually covered with the leaves of the trees, or remains of them and the falling timber. From these deposits, there were several inches of vegetable mould created, and the sun not having had access to the ground to dry out its moisture and render it compact, it was in a fit state to yield large returns to the farmer, and it did yield them.

We have all heard of the fertility of the western part of the State, and that they raise from twenty to forty bushels of wheat to the acre. This is true: but is it generally known likewise, that a considerable portion of the land is clay upon which they raise these heavy crops. The presumption is, that they will continue to have good crops of wheat as long as this vegetable mould which the forest has been the cause of accumulating, will last, and no longer. Exhaust or remove this vegetable mould, and their clay soil will be as hard and as stiff as ours. They put on wheat after wheat—our fathers did the same—until they have exhausted the fertility, and left nothing but the residuum of the virgin clay behind; and this soil now constitutes the clay fields we see around us. We have long felt and now feel the evils of this kind of farming by our progenitors, and would be happy to apply the remedy.

The remedy in part, I have suggested in my previous remarks upon the deficiency in the soil for the speedy growth of plants; but it is not always easy or practicable to draw on lime, sand or gravel. In suggesting that remedy I will state my own experience in reclaiming clay land, and the methods I have used to effect, and leave you to judge how far it can be advantageously practised. I have owned a farm of 200 acres for say 15 years. My practise has been to stock it with a few cattle, but feed on it principally sheep—to plow only enough of it to employ two hands during the summer; not to sell any hay from the farm, but to make all the manure I could upon it. By this course of husbandry I find myself rewarded, because I have received more in immediate profits than the interest on the investment I have made would come to; and I have been enabled to manure the meadows at least three times, and several of the pasture lots. I found that I could, in most seasons, raise good crops of oats, but for the last three years I have suspended in a measure the oat crop, and gone back to wheat: and from the experience I have had, I feel the assurance that this barren exhausted clay farm, by continuing the cultivation of it on the plan I now adopt, will ultimately become, as it has already been, a source of great profit to me. It is well known that a clay soil is not congenial to the growth of corn, and that rye grown upon it does not make good flour. When it can be manured, it is better adapted to the growth of all the grasses, wheat and oats.

Knowing this, we must follow out the indication of Nature, and act accordingly. The practice I have adopted has been this: To manure an old, worn-out clay lot, summer-fallow it and plow it repeatedly; sow it early to wheat in the fall, together with grass seed. For three successive seasons, I have succeeded not only in my wheat crop, but the grass has done remarkably well the following year. Now, what prevents us from carrying out this practice? If we can reclaim a lot, can we not by perseverance reclaim a whole farm? And what, let me ask, can be more profitable husbandry than a good wheat crop followed either by hay or pasture? If then, carting on lime, sand, gravel or dung, one and all—remembering, however, that manure must be one of the ingredients to make the improvement permanent—what is to prevent the industrious and intelligent farmer from making our now worn-out clay lands our most profitable farms. Again: sow it early, sow it in August—give the plant plenty of time to cover the ground well with its foliage before winter sets in. This will afford protection to its roots, and we will not hear so many complaints about your wheat being frozen out on the clay. The leaves will protect it. I will add one word more on the subject of sowing grass seed. I sow timothy and clover—three times the quantity of the first, to one of the last.

My observation thus far has taught me that the earliest sown grass-seed does by far the best. I have sown in September, in October and November. The first did well, the second not so well, and that sown in November did very badly. I could add more on this subject, but I trust that I have said enough to be understood. The suggestion is sufficient—your own good sense will supply all that is wanting.

And now, fellow-farmers, before we separate, permit me to ask in conclusion, have you for the last year done justice to your profession, to your families and to your country?

Have you called to your aid all the agricultural reading within your reach, and taken advice from those of your neighbors who are able to give it? Are your farms generally, in a better condition than they were one year ago? Are your fields better laid out and enclosed—your waste grounds less--more of it grubbed up and improved--your ditches opened—useless stones removed, and the general surface of the ground better adapted for the raising of crops? Has your land been made richer to enable it to yield more, and have you collected a large amount of materials to increase your annual stock of manure? Are your houses more comfortable, besides of a neater appearance from the labors of the year? Have you added to the convenience and safety of your barns, to make them better adapted for the purposes for which they were built? Has your stock of cattle and horses improved, not only in number, but more in quality and appearance, and consequently in value? Have you selected, and do you raise the best kind of sheep—I mean those kinds that are most profitable to the owner? Have you the most profitable breed of hogs, and do you carry just so many through the winter as best conduce to your interest? In short, have you so farmed in all things that you have no cause of regret, because you have given to all a proper degree of attention and care?

If you have done so, you will reap the result; and I congratulate you, for you have done full justice to your profession, to your families and to your country. If Providence at the end of another year should again bring us together, from the strong confidence that I have in the intelligence and good habits of my countrymen, I feel an assurance that we shall see the good old county of Columbia marching with still more rapid strides toward all that contributes to individual happiness and National greatness.

CULTIVATION OF LUCERNE.

A "Subscriber," at Strawberry Hill, North Carolina, asks for some information on this subject.

A deep, rich, and rather light soil, is best for lucerne, and it is hardly worth while to attempt its cultivation on soils of an opposite description. The preparation of the ground consists in deep plowing, and fine pulverization. Any kind of manure suitable for clover, may be used—mixed with soil. It may be sown either broad-cast, with some kind of spring grain, or alone in drills. We prefer the latter, for the following reasons: When sown broad-cast, with or without grain, its growth is much checked, either by the grain or weeds, or by both—if a drouth occurs at the time the grain is taken off, a large portion of it dies, and what remains is so injured that the succeeding winter probably kills it. After repeated trial, we have found it very difficult to get it through the first summer and winter. Unless the weather is very favorable, so much of it dies, that it is left too thin. Having failed some half dozen times in the broad-cast mode, we tried sowing in drills with a machine, and succeeded completely. The drills were about ten inches apart, and the spaces were hoed once or twice, by which means the weeds were kept down, and the lucerne grew so rapidly that it was cut three times the first season—only about a month being required between the cuttings to produce a growth of more than a foot in height. It produced at the rate of five tons to the acre.

We should prefer sowing as early in the spring as the ground would admit of, in order that the lucern might get a start of the weeds. In the broad-cast mode, fifteen or sixteen pounds of seed is recommended—in the drill mode, eight or ten pounds, if properly sowed, will be sufficient. There is no necessity of permitting a crop to go to seed, as our correspondent suggests, as the roots are considered perennial—at any rate, they live many years. In regard to the marls mentioned, it would be better to try them, as well as lime, plaster, &c., for the effect of these cannot be positively foretold.

The seed might be had at any of the principal seed stores of our cities. Its cost is from twenty-five to thirty-seven and a half cents per pound. By the quantity it could probably be had for less.

Lucerne is greedily eaten by all kinds of stock, and it is considered highly nutritive. It may be fed green or made into hay. We know

of no plant of equal value for soiling. Its growth commences very early in the spring, and continues without interruption through the whole season. No ordinary drouth affects it in the least, after it once gets fairly rooted. The roots have been traced to the depth of more than three feet in the earth, the first season, when sown in drills. The only cultivation that it requires after the first season, is an occasional harrowing before it starts up in the spring.

From the Southern Planter.

SMALL FARMS AND THOROUGH CULTIVATION.

The anecdote of the boy carrying a stone in one end of his bag, to balance the corn in the opposite end, because his father had done so, shows in some degree the force of education and habit. This stone-carrying system is of broader application than may be at first imagined. To exemplify. A father has a field of one hundred acres of land which he cultivates because he has laborers and team to do so; perhaps fifty acres of this yield something like two bushels per acre, a little more than enough to feed the laborers and team whilst engaged in the cultivation; the son inherits it, and forsooth, because his father had done so, he continues the practice, until he finds it expedient to remove to some new country. To arrest a course like this, so destructive to lands and fortunes, I propose a few remarks. All who have noticed any thing about farming operations in Eastern Virginia, cannot fail to have observed the thirst for extensive cultivation, irrespective of the quality of land and its productiveness, and those engaged in it have found at harvest time that their crops have mostly been gathered from a few patches of land in tolerable heart, whilst the greater portion of the field required oxen in pretty good keep to collect a load of ears, more resembling awl handles than corn. In view of this fact, and in view of the immense products of the small northern farms highly improved, it is passing strange the course should be persisted in. I suggest the following one to remedy this evil: Say a man has a field of one hundred acres of land, half of which is nearly unproductive, which will require eight hands to cultivate it; let him take three of his hands from his field, and commence early in the year to haul from his woods, leaves, mould, swamp mud, walls of ditches cut through his swamp land, and any vegetable matter he may have, and apply it to the unproductive part of his field so far as it will go; and I will venture to affirm that the product of the part of the field in cultivation, will far exceed the product of the whole field in any previous year, seasons and cultivation being alike. When these sources of improvement are exhausted, let the hands above employed in improvement, remove the ground works of fences that have been standing for years, and take the soil from under them and apply it as manure, as it really is, and the product of this process will astonish any one who has not experimented in this way, and will leave your fences cleared of shrubs and briers, which yearly consume much time and labor in clearing, and so much injure fences by obstructing the wind and sun from them. This source of manure having been exhausted, if you have light or sandy land, take from your adhesive clay subsoils, clay to cover it, say about twenty-five or thirty loads to the acre, scatter the same so soon as it is deposited, so that it may have the frosts and freezes of the winter to pulverize it, and turn it under in the spring preparatory to planting corn. This will give tenacity and fertility to this kind of soil, and one experiment of the kind will embolden you to a continuance of the practice. As respects manuring, from repeated experiments, I am fully persuaded a surface application is the most beneficial on sward or fallow. I would prefer applying it on the sward in August for the ensuing year's crop of corn. When there is a great scarcity of manure, a quart of stable manure or a pint of ashes dropped on the corn hill after planting, will produce a result in the crop, that no one would anticipate who had not thus experimented, and I incline to the opinion, that it will be the most speedy way to cover over a large surface, and make a good crop at the same time. It is true that this application at first is too limited for a small grain crop, nevertheless, you have applied the quantity of manure over double or treble the surface you would have done, if it had have been applied broadcast; you will have obtained double the quantity of corn you would have made from a broadcast application of the same, and I believe you will make as much small grain from this extended surface. On the second cultivation of a corn crop, with the beds reversed, and a like application of manure, it will have diffused itself more generally over the surface than could be imagined. All I ask of the skeptical on this subject is, to make one experiment. I have frequently applied it in this way, and invariably have derived benefit from it, exceeding my expectation.

A few words in relation to the varieties of corn; in these I have experimented largely, and the result is decidedly in favor of the largest kind. Poor land will not bring large or small, and rich will produce much more of the large than the small. Of one of the small varieties I once obtained eleven ears well matured from one stalk. The appearance was very imposing, but lo! when I came to test the product of this variety with a larger one, I found one large ear to yield one-eighth of a gill more than the eleven. When the gathering of the ten additional ears, the shucking and housing, and the deficiency in yield are taken in the estimate, I think no one will hesitate in awarding a preference to the large kind. REXBURG.

From the Southern Planter.

ECONOMY OF FARM LABOR.

There is no subject of greater importance to the farmer than the judicious application of his farm labor, and there is none that receives so little of his attention. False economy often induces men to use an old worn-out tool when, for want of a good one, they lose more every hour than would pay for two. A wood-cutter with an old stumpy axe labors hard all day and is dispirited because he has nothing to show for his labor; he is scolded probably for what is entirely the fault of the tool: with a good tool he is active and cheerful, because he feels that his day's work will speak for itself. Some men use wooden pitchforks for hay; the time lost in hunting for a proper stick and in cutting it, would often secure as much hay as would pay for two steel ones; and then to see a man make five or six ineffectual efforts to stick the fork into a pile of hay, and at last take up about one-third of what he might with a good one, and having one-half of that falling back into his face, is enough to disgust any body in the world who loves to see work done as it ought to be. It is the same thing with dung forks. Give an ordinary hand a good steel fork and he will load a cart in less time than the best hand will with an inferior one—but to observe the indifference of our farmers to such things is to me, who have been used to different things, a matter of astonishment.

Raking up Hay.—As I observed in your paper once before, one man with a horse rake is as good as four and I believe six with the ordinary hand implements. Pine boards for compost should be collected whilst the ground is wet; then a portion of earth is taken up with them, which keeps them compact, and a cart carries in the bulk double the weight. The size of the manure heap depends upon the facility with which it is accumulated; what we obtain easily we use bountifully. As to the

Application of Manure.—Suppose a farmer has twenty head of cattle; he pens them in his farm-yard and hauls in trash to litter it with. In this way he may make eight hundred loads of manure, which it will take him eighty days, at ten loads a day, to haul out upon his fields. Of this probably five hundred were litter, which it has taken him fifty days to haul in. Here is one hundred and thirty days employed in hauling. Suppose, instead of this, he pens his cattle upon his ground previously broken up, on a quarter acre at a time, and hauls the five hundred loads of litter directly to these pens of plowed land, is it not evident that he gets the same amount of manure with fifty days hauling, instead of one hundred and thirty? If this process is followed, and lime added where the soil is deficient in it, the loss from evaporation and washing is less than by any other means that I know of, and certainly the saving in labor is very great.

Hours and Weather for Work.—It is bad economy to rouse your hands, as some do, by starlight, keep them at work for several hours on an empty stomach, make them guzzle down their meals, and off again to work as long as they can see, and then depend upon their feeding in the dark. Some think a little rain wont hurt, and drive on through a drizzle; the body hot from work and the skin cool from rain, induces cold, and lays the foundation oftentimes of the very worst diseases. The loss of time, and sometimes of life, from such causes, together with the doctor's bill, doubles the amount of gain that can ever accrue from such means.

The following is my plan of

Working Corn.—Lay off the corn rows deep with a two-horse plow; plant in the bottom with the usual covering; then when high enough to work, put in the cultivator so that the right hand tooth will split the edge of the furrow on each side, and the corn will be wed, and hilled a little, and the ground left light and fine, *without hoeing.* Now be not deceived here; deep *planting* is not deep *covering.* Plant deep down, but cover light, and when well rooted below, work as above directed, and your corn will bear working close to the stalk, and will, in my opinion, when the dry weather comes, bear working at least ten days longer.

I could enumerate many other points affording a fair scope for the exercise of economy in labor, but it is probable that he who will not take the hint from what has been already said, would hardly be profited by a more detailed view of the subject. I will close this communication by a single other remark upon tools in general, and one of my own in particular. It may be asked, shall we throw away our old tools and buy new ones? I answer, if your good fork is worn too short for a strong man to make a good day's work, give it to a boy, or keep it for work that may injure a new one; but never expect a full day's work from a good hand with an inferior tool.

I would mention an implement of my own invention for cutting down and picking up corn; it is the circular part of an old reap hook, with a shank bent to it, which is a little turned and driven into a short handle; with it when ground keen, a man can cut with the right hand and heap with the left as fast as one can cut and another heap in the ordinary way.

My aim in this communication is to encourage those who are without means to be their own means, and to work out their own independence by the shortest route; but do not think for a moment that your implements are complete without having some agricultural work coming constantly to you with the latest news, that you may profit by the advice and experience of others. J. H. D. LOWNES.

A NEW FASHIONED MATTRESS.—We sojourned lately at the house of a country friend, where we were treated to the most comfortable mattress it has ever been our good fortune to encounter. At first we thought it was fatigue which had converted an ordinary couch into a "thrice driven bed of down;" but we soon found that there was a most comfortable peculiarity about the bed itself, and upon inquiry we found that we had been lying upon a mattress consisting of eight or ten blankets quilted together and encased in a linen cover; this mattress rested upon an ordinary feather bed. This hybrid between a feather bed and a mattress, secures all the softness of the one and all the levelness of the other. Moreover, it is an excellent mode of disposing of the blankets during the summer.

We warrant he who tries it, never buys another hair mattress.—*Southern Planter.*

NEW AND IMPROVED COTTON GIN.—The Alabama Monitor says: We alluded a few months ago, to the fact that John H. Sherard, Esq., a wealthy and skilful planter of Sumter co., and withal a man of great mechanical ingenuity, had invented and patented a Cotton Gin, superior to any other now in use. We copy the following notice of it from the Sumter county Whig of 22d inst.:

"A few days ago we saw Mr. Sherard's new patent Cotton Gin in full operation, and we can assure those who have not seen it, that it greatly improves the quality of the cotton ginned, and is altogether a beautiful piece of machinery. It is very simple in construction and easily kept in order. The saws are nearly like those of the ordinary Gin, save a slight difference in the cutting of the teeth. The ribs are circular and revolve with the saws—behind the ribs is a cylindrical brush revolving against the saws, which takes out motes, trash and dirt; still further behind and a little below is a similar brush which takes off the cotton from the saws, and carries it over a grate, which entirely removes the remainder of the trash, dirt, &c.; Still further back is a brush with wings, which blows the cotton through a flue with a tin bottom, perforated with oblong holes similar to those of a tin lantern, through which, should there be any remaining trash or dirt, the whole will pass. This flue has one advantage over all others, it never chokes up, and consequently does not require delay of time in cleaning it.

"The whole is carried by two hands and works most admirably. A fifty saw Gin, the size of that Mr. Sherard now has in operation, will gin four bales per day. We would advise every farmer to visit Mr. Sherard and judge for himself. Mr. S. has been at great trouble and expense in perfecting his improvement, and we have no doubt his efforts will be justly appreciated by the cotton growing interest. We would remark that the improvement may be attached, at small expense, to the ordinary gin; and further, that Mr. Sherard's new gin will cost but a trifle, if any more, than those now in use."

A RECIPE FOR DR. HENKEL'S BEST PIES.

We have received from our friend, Dr. Henkell, of New Market, a recipe for making what he styles, his "best pie;" and, as our taste sometimes has an inkling that way, we have thought that it would not be uninteresting to our fair readers, who pride themselves upon serving up the dainties of the table, to give them an addition to the culinary department of household economy. As pies, however, have their genealogy as well as politicians, and are most esteemed for their particular flavor, we have thought proper, on the present occasion, to introduce a sketch of the origin of this "favorite," with the view of enlightening those who have been content to nibble a stale, flat, insipid article, because, forsooth, they did not understand the "pints," as one of our learned phrenologists would say. It seems, from the information we have gleaned on the subject, that many years ago, the good "helpmete" of our worthy friend was preparing nick-nacks for table use, and having "*run out of sorts*," as we printers sometimes do, she had barely enough of apple and whortleleberries (vulgarly termed huckleberries) left to make a pie when compounded. To throw the ingredients away would have been sheer extravagance—to mix the two together would *make a pie!* but how would it *taste* was a question to be solved. She, however, in imitation of all good house-wives, who study the interests of their family, went to work and tested the experiment by an admixture of apples and whortleberries. The pie (unlike those we printers have to digest) was found to have increased the flavor, and has since become quite a family favorite. With this brief history, and a request to the fair sex to test the experiment, we shall add the recipe: Take of finely sliced apples and whortleberries equal parts, add sugar to suit the taste, and make your pastry and bake them as other pies; and we would add by way of conclusion, that if you don't find them agreeable to the taste, just hand them over to the printer.

COLD STARCH FOR LINEN.—There is economy in stiffening the collars and wristbands of shirts with unboiled starch. Take as much of the best raw starch as will fill half a common tumbler, or a half-pint cup. Fill it nearly up with very clear cold water. Mix it well with a spoon, pressing out all the lumps, till you get it thoroughly dissolved. Next, add a tea-spoonful of salt, to prevent its sticking. Then pour it into a broad earthen pan, and add gradually a pint of clear cold water, and stir and mix it well. Do not boil it.

The shirts having been washed and dried, dip the wristbands into this starch, and then squeeze it out. Between each dipping, stir it up from the bottom with a spoon. Then sprinkle the shirts, and fold or roll them up with the collars and wristbands folded evenly, inside. They will be ready to iron in an hour.

This quantity of cold starch is sufficient for the collars and wristbands of a dozen shirts. Ladies' collars may be done also with cold starch, if the muslin is not very thin.—[*Miss Leslie.*

AGRICULTURAL PUBLICATIONS.—We must study our profession; we have many judiciously conducted periodicals, and many scientific works, and no man who has a proper pride in his profession fails to read some agricultural paper with all the zest that ever a politician devoured a partizan journal. These productions from practical farmers, amuse, interest, and instruct. They excite us to increased exertion;—inspire us with confidence in undertakings which otherwise would be abandoned upon the first failure;—give us plans, the most approved, for all our farm buildings;—make suggestions which are often of the greatest importance:—indeed, they act as "a friend in need,"—as a wise counsellor, a judicious, experienced adviser. These papers are of as much importance, and are as necessary to the planter in the successful prosecution of farming, as the political newspaper is to the statesman, or the "reports of cases" to the lawyer.—*Bowie's Address.*

CHINA WHEAT IN MARYLAND.—There has been left with us a few heads of wheat called the "Hardware Wheat," taken from the Bloomfield farm, belonging to Henry R. Smelter, Esq., near Middletown, Maryland. The history of this white wheat is thus stated: A few heads were found in a crate of China-ware, imported from the North of China, first into Canada, and then introduced into the soil of this country. It averages from one hundred and fifty to one hundred and eighty grains to the head; will yield from forty five to fifty bushels to the acre, and ripens from eight to ten days earlier than other species of wheat. The crop is now cut; it was ripe on the 24th of June, and will, it is believed, yield from forty to forty-five bushels to the acre, supposed to make from ten bushels sowing from two hundred and seventy-five to three hundred bushels.—*Frederick Herald.*

CURE OF CONSUMPTION.—A letter from Darmstadt, dated 2d September, in the *Ober Post Amts Zeitung*, describes a striking method for the cure of pectoral complaints: "The surgical operations of Dr. Van Herff at present attract great interests here. These operations have in several instances effected a decided cure in cases of tubercular pulmonary consumption—*phthisis tuberculosa.* The seat of the ulceration having been ascertained by means of the stethoscope, the matter is discharged outwardly by an incision being made in the cavity of the breast, penetrating the lungs. The cure is finally effected by medicine injected into the wound by a syringe. We have hitherto refrained from making known these operations, as we wished to await the results; but we are now enabled to affirm with confidence that in several instances the operations have obtained the most complete success, and in no case have been attended by any danger of life. We hope that Dr. Von Herff, after an extended series of experiments, will make the observations deduced from them the subject of a philosophic inquiry."—*Spectator*

THE WOOL TRADE.—According to the best calculation, says Mr. Williams, in his admirable address on the Tariff, it is supposed that there are about 34,000,000 of sheep in the United States, worth on an average about $2 a head, and yielding about 90,000,000 pounds of wool, worth at 30 cents per lb. about $27,000,000.—These sheep at three to the acre for summer and winter, would require 11,333 333 acres of land for their support, which at $12 per acre, which is considered a fair average, would be worth $136,000,000. To manufacture this clip of wool will require about 45,000 hands, who with families averaging three persons each, and amounting in all to 180,000, at a consumption of $25 per annum each, would require $4,500,000 worth of agricultural products for their support, which, at a net yield of $2,50 per acre for the market, would require 1,800,000 acres of land, worth at $12 per acre, $21,600,000. The capital invested, then, by the farmer in this business alone is about $225,000,000, and the annual value accruing to him, about 31,500,000, while the capital stock invested by the manufacturer himself in building, machinery, &c., to work up the whole annual product would not perhaps exceed $45,000,000, or about one-fifth of that of the agriculturist.—*Troy Whig.*

EAU DE COLOGNE.—The sweetest lady in the world recommended to us the following recipe for making cologne:

Mix 120 drops oil of bergamot;
120 drops oil of lavender;
140 drops oil of lemon;
60 grains of musk, and
1 pint of purest alcohol.—*Southern Planer.*

☞ The northern papers contain notices of heavy rains in all that region. Perhaps it may come our turn shortly to be thus favored.

From the American Farmer.

SUBSOIL PLOWING.

The advantages of subsoil plowing, has been very forcibly called to our mind by the subjoined article which we copy from our intelligent contemporary, the Southern Planter. It is many years since we recommended deep plowing, and it is not a little gratifying to us that we find the dread of disturbing the till pan, beginning to disappear from the minds of many, who, some few years since, would as leaf have crossed the path of a boa constrictor as break up the clay resting beneath some four inches of exhausted sand, which, from time immemorial, has answered as an apology for soil. We recollect to have called at a farm in a neighboring county, in 1839, to get our horse fed. It was in the occupancy of a tenant who had resided there for twenty years, and who, in the whole course of that time, had never penetrated the earth with the plough more than three inches. When we called, we found him engaged in *scratching* the earth with a one-horse plow, going scarcely deep enough to cover the poverty grass with which the field abounded. After saluting him, and procuring a feed for our horse, while the animal was masticating his meal, we entered into a pretty free conversation with our host, which we will here repeat, with the view of showing how absurd are the notions of men who are wedded from the prejudice of ancient prescription to old practices, and eschew all book farming as worse than nonsense.

"Why do you not plow deeper, my good sir?"

"God bless your soul, stranger, if I *was* to break up the till bottom, and turn up the red clay, I should *pizen* the ground and nothing in

the *yearth* would grow, and besides all the manure (and I've none to spare) would sink down into the ground, and my *crop* of corn wouldn't *git* no good from it; as it is, the manure I *puts* on the ground sinks into the *yearth*, and I only *gits* benefit from it for one *crop*."

"Well now, my good sir, you have given me your *theory* for shallow plowing, and, with your permission, I will give you mine in favor of *deep* plowing."

"What do you mean by theory?"

"*Theory* means the settled ideas which a man may have imbibed, as the governing principle of his action, and is to him the motive of his practice."

"I don't understand you."

"Then, sir, what I mean by theory, is this—it forms the *reason* of my doing any thing—for instance, if I were going to plant corn in this field of yours, I should manure it, because theory tells me, that the plants would require feeding to make them grow. Do you understand me now?"

"Oh yes."

"Then I'll give you my *reasons* for *deep* in preference to *shallow* plowing, and why I should mix a portion of the clay that lies beneath, with the sand above. You are fearful to break the pan, fear your manure will sink, and yet you admit that what you put on the ground, only lasts for one season, and you apprehend that, as it is, it sinks into the ground and gets below the reach of your crops. Now I think you are mistaken as to the cause of the loss of the good effects of the manure. I believe that, instead of its sinking, and thus eluding the reach of the roots of your growing plants, that it escapes from the *surface* of the earth You bury it so shallow, and expose it so immediately to the heat of the sun and atmosphere, that, upon every succeeding rain, the manure rots faster than is necessary to the sustenance of your crops—faster than the rootlets can take it up, and as the most valuable, if not, indeed, the only part of manure that is valuable, is light, and volatile—it escapes through the pores of the earth, and is wafted away by the wind, and in all probability, is carried to your neighbor's land, where if it has a suitable soil it is attracted and absorbed, to enrich his land and nurture his growing crops. I notice that your corn stalks are very small and easily broken. The reason of that is this—there is very little potash in your soil, and hence not enough to dissolve the sand, and form that flinty substance which constitutes the elastic principle that enables either grass, corn, wheat, rye, or barley to stand erect. In all virgin clays there are more or less potash, and if you turn up some of your subsoil and cross-plow it, so as to mix it with the sand, you will just supply your land with one of the very ingredients which it wants."

"Well, but the red clay will *pisen* the land, and nothing will grow on it."

"Not so. I don't wish you to turn up more than two inches at any one plowing, and whatever may be injurious to vegetation, in that quantity, will be corrected by the sun and air. It is the oxide of iron, which gives the red color to the clay underneath the sand of this field, which, if it were in too great quantities to be brought into immediate contact with the roots of growing plants, might possibly injure them, but the quantity I name, could do no harm. If you had *lime* to apply to your land, the oxide of iron would be converted into a substance similar to plaster, and an immediate benefit would enure to you, in a two-fold sense, first by neutralizing the bad effects of the iron, and secondly, by converting the latter into plaster."

"Who ever *hearn* of iron being in the ground except in lumps hard as stones?"

"Many before you were born."

"But let me proceed. By annually turning up a portion of your clay, instead of having to cultivate an almost barren sand as you now have, in a few years, you would have a good mould, that would resist the influence of the scorching rays of the sun, and your crops would avoid being burnt up by the slight droughts. Your manure, instead of being drawn up and lost through the heat of the sun, will remain in the earth, rot gradually, and as gradually supply your growing crops with food, and you will find that, instead of having to manure every year, once in four years will answer, and particularly if you sow clover and turn that in every second year."

"Why, bless you, clover won't grow here."

"Yes it will, if you do as I tell you: plow deeper, turn up and mix the clay with the sand and lime in your land. If you can't afford to lime, plaster it. A bushel to the acre for a year or two will enable you to raise clover, provided you turn up the clay and get the potash into action."

"Potash! why, there never was either potash or ashes put on this ground, and I'm too far from market to haul it, if I was able to buy it, which I ai'nt."

"I told you before that there was potash in the red clay."

"How did it get there?"

"Providence placed it there, for wise and beneficent purposes, and it remains for you to use it or not, as you may see fit. Plow deeper, I tell you, and you will find potash enough, to add to the fertility of your soil and increase your crops."

"I *reckin* you're a book farmer—you talk so like the strange things *I's hearn* on."

"No, my good sir, I'm not a book farmer, but like yourself, a farmer in a small way, even smaller than you are, yet I do read books, and papers too, on farming, and have read them with delight, and I hope profit, from my earliest recollection. What I see in them that my judgment approves, I practice, if an occasion offers—what I see that I do not approve, I reject—and if you were to take an agricultural paper, both you and your children would profit by it. No man ever yet read anything without gaining by it. The agricultural papers, besides containing the essays and views of *theorists*, have much of the practical experience of *practical* men in them, and by reading them, men become acquainted with the customs and modes of culture of all parts of the world, and surely, with such a field before them, those who do not improve by it must be dull indeed. But I have a few words more with regard to deep plowing, and its effects in promoting the growth of crops. By deepening the bed in which the plants have to grow, you enlarge the pasture of the plants; you enable their rootlets to descend, as well as spread with more facility, and it must be obvious, that by so doing, you greatly improve their chance of growing, as the least difficulty they may experience in searching for food, the better chance will they have of thriving. You say that the red clay beneath the sand, is poisonous to your crops. Be it so. But keeping it in a compact form, you do not render it less injurious, for notwithstanding its hardness, the roots of your corn will penetrate it several feet, so that the objection which you have raised, is *imaginary*, not *real*, and by keeping that stiff clay in an unbroken state, you present it to the roots of your corn, in the very worst and most injurious form that you possibly can,—plow deeper, turn it up to the action of the sun, the air and the rains, and you will soon rid it of its poisonous qualities."

"How deep would you recommend me to plow?"

"Why, I would have you increase your soil two inches each year, until you get at least nine inches in depth."

"Why, bless you, stranger, my plow can't never go that deep, and besides, my horse couldn't never turn up nine inches."

"Get a bigger plow, and put in two horses instead of one. By getting a deep tilth, you will enable your land to absorb a good deal of manure from the atmosphere."

"Who ever *hearn* talk of manure being in the air?"

"I have. There is at all times floating in the air, a substance, which if you can only impart to your soil the power of attracting and absorbing it, you will find that it will add greatly to the fertility of your land. That which escapes from your soil as the manure rots, is the substance I mean, and it is carried away from *you*, to add to the fertility of your neighbor's land, because of its being in a condition to retain it. As the manure in your barn-yard rots, its most enriching properties are carried off by the same process and lost too you. If you wish to prevent such loss, you can do so, by keeping a few inches of dirt of any kind spread over your manure. This will act in a two-fold way, beneficially to your interest. It will prevent the escape of the gaseous substances I have spoken of, while the body of earth above the manure, will become impregnated with the richest of the manure, as decomposition goes on, so that the earth, thus placed on the top, will become as good as any other part of the manure. You have often smelt at a distance from your manure pile, an unpleasant stench, have you not?"

"Yes."

"Well that is what I call a gaseous substance, and the very best and most fertilizing part of the body of your manure pile. It is that which flies off with each current of wind, is lost to you, and enriches the better land of your neighbor, because that land is in a condition to a tract and absorb it, as I have before told you."

"Well, stranger, I don't understand all you have been saying, though I think I'll try to plow a *little* deeper, and burn some of the shells about my house and shore, and see if I can raise clover."

"If you'll do so, you may raise clover and timothy too, and make three bushels of corn where you raise one now. Do you raise any wheat?"

"No; my ground won't grow it."

"Follow my advice, and after you get a good crop of clover, plow that in, seed your field down in wheat, and I'll promise you a good yield, provided you apply ten or twenty bushels of lime to the acre.

"They *tells* me that a hundred bushels is not too much."

"That's very true, but the quantity I have named will answer for several years, and I see no necessity for a man of small means applying a large quantity, when a smaller one will answer present purposes. I believe that lime is not only an alternative, that is an, amender of the soil, but I believe it is also a positive manure, that is, that the plant takes it up as a nutrient."

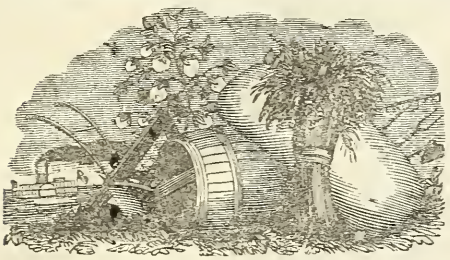
"Nutrient! what is that?"

"A substance that nourishes and encourages the growth of plants."

With this our conversation ended, and we were happy to learn only a few days ago from the individual to whom it was addressed, that he had followed our advice, and had last year, from a field which he was formerly in the habit of getting from two to four barrels of corn to the acre, according to the season, gathered upwards of eight barrels, and that he had grown as fine a crop of clover as he wished to have, when; in former times, when his field was *resting*, nothing but a poverty grass and stinted weeds reared their heads.

—

Subsoil Plowing.—Its efficacy in actually improving the character and depth of soils, where proper tillage has been maintained, has been abundantly proved, and perhaps nowhere more signally than in resuscitation of the sterile lands exhausted by tobacco culture, in Virginia. I speak from my own observation of its wonderful utility in a neighboring county—Fairfax—and have the corroborating testimony of the of the distinguished Judge of that circuit, who declared some time since, that Fairfax, from being proverbially one of the poorest, was fast becoming one of the most fertile counties of Virginia; and this change has been wrought by the immigration of Northern farmers, bringing with them all their agricultural enterprise, and knowledge of what may be properly called the mechanics of agriculture.—*Southern Planter.*



WEDNESDAY, NOVEMBER 13, 1844.

Our Third Volume.—As the time is rapidly approaching for entering upon our third volume, it may not be inappropriate to address a few words to our numerous friends and patrons in reference to the prospect before us, and to advise them of what they may expect from our future efforts in the cause of Southern Agriculture.

Of the past we need not speak, for those whom we address are familiar with the manner in which we have discharged the responsible duty imposed upon us in the conduct of an agricultural journal. It was an experiment, and one which, thus far, has partially succeeded. If our success has not fully equalled our most sanguine expectations, we feel well assured we have laid the foundation upon which a most magnificent and valuable superstructure may and can be successfully reared, for the benefit of our fellow-men. This is indeed an important point gained, and it has been attained too, after encountering, in our progress, almost every species of opposition which could be offered to such an enterprise. We have had to encounter every species of prejudice which could possibly be incident to minds never disposed to regard agriculture as a science, and in which had grown up the most inveterate hostility to everything which savored of "*book farming*," as it has been sneeringly denominated by that class of farmers. Happily for us, and for the well-being of society, during the now near two years in which we have been struggling to excite an interest and to produce an improvement in agricultural science, these clouds which overhung us with such a lowering aspect, are slowly, but certainly, disappearing before the sun-light of truth, sustained and supported by the results of experience and the well-attested experiments of practical men. And now the "Southern Cultivator" is finding its way to the firesides, and has become the companion, of those who but recently would not have admitted it into close intimacy.

Thus much for our continued perseverance, aided, sustained and urged on at every successive step by a few choice, but sterling and unwavering friends. But our object was to speak of the future. Let us unfold then to our friends what are our designs and purposes. Conscious of our own inability to do ample justice to the great cause in which we have embarked as Editor of a Southern agricultural journal, we have been looking around for some one more capable upon whom the responsible duties of Editor of the Southern Cultivator might be appropriately conferred, with a due regard to all the great interests involved in the issue. And we have now the high satisfaction to announce that our efforts have not been in vain. We have secured the services of a gentleman distinguished for his learning and research, who has devoted much of his time and directed the energies of a mind of acknowledged power to the investigation of the science of agriculture, with whose ability as a writer our readers are already familiar. We have, therefore, additional claims upon the kind and favorable consideration of our friends; and we trust that this renewed effort of ours to meet their just expectations will not be permitted to go unrewarded. We therefore throw ourselves upon the kind indulgence and generous liberality of our friends, and ask them to bestir themselves for the circulation and consequent improvement of our paper, for upon them we must rely, as we cannot incur the expense of sending round agents to collect and obtain subscriptions. Every man who reads the paper and desires to see it sustained, has an interest in its success, and in proportion to that interest should he endeavor to extend its circulation, for upon that and that alone are we dependent for remuneration. We do not, then, in consideration of all the great issues at stake, ask too much of every friend of agriculture—aye, of every man in whose bosom pulsates a true patriot's heart—to exert himself for the extension of our circulation.

The new arrangement will be announced in a prospectus, which we shall issue in a few days, in which we shall set forth, distinctly and fully, all the improvements, &c., &c., our friends may anticipate in the forthcoming volume.

Statistics—"*A Georgia Overseer.*"—We regret exceedingly our inability to furnish the statistics asked for by our correspondent "*A Georgia Overseer*"—nor can we refer him to any source from whence he can obtain any portion thereof, save the returns of the census for 1840: and even that will be found very deficient in much that it attempts, with regard to the Statistics of the State.

The exports and imports of Georgia cannot be arrived at with any near approximation to truth, unless by the aid of *guessing* a man should happen to come near. It is true, the exports and imports of Savannah might be obtained, but then we could not ascertain what portion of the exports were the growth of South Carolina, nor could we arrive at what portion of the exports of Charleston and Apalachicola were the growth of Georgia.

Neither do we know how many Agricultural Societies there are in the State, although we are well aware that they are quite too few for the well being of society and the rapid and successful improvement of Agriculture. We have probably two thousand subscribers to the "Southern Cultivator" which ought to be increased to twenty thousand in Georgia alone, besides what our friends in Alabama, South Carolina and Mississippi can and will do for us.

Here there is a wide field for our friends to operate in, and we should like to heer a unanimous resolve go up from every subscriber we have in Georgia, "that each one *would* obtain TEN subscribers to the 'Southern Cultivator.'" What say you to this, friends of the cause? Will you not enter the list of a glorious rivalry in such a noble enterprise? Some—aye, many of you, can obtain ONE HUNDRED. Will you do it?

Texas Cotton Seed.

On our last page will be found the advertisement of our friend John W. Graves, offering to dispose of a very valuable article of cotton seed, to which we refer the reader. It would be needless for us to add any thing to what is there affirmed by the very respectable gentlemen whose statements are appended to the advertisement.—They are all men whose characters for truth and integrity raise them high above any suspicion of countenancing or aiding in the practising of a humbug upon the people, and their statements, therefore deserve, as they will doubtless receive the favorable consideration of the public.

Professorship of Agriculture.—A Professorship of Agriculture has been established in Amherst College, Mass. The Professorship is conferred upon Alonzo Gray, author of "Scientific and Practical Agriculture."

From the Cultivator.

IMPROVING LAND BY GREEN MANURES.

It is believed by some, that the best kind of vegetable growth for turning in, in the form of green manures, is Indian corn sown broadcast. If it be intended to apply lime to the land, it would be well to do so the fall before. Then as early in the spring as circumstances will permit sow corn broadcast, say three or four bushels to the acre, and as soon as it has grown as high as it can be conveniently turned under with a deep working plow, turn it under, and immediately sow another crop in the same way, turning that under as before, but with a medium plow run crossways of the previous furrow. In the middle and southern States, three crops can thus be turned under in one season. It is believed that no system of manuring or renovation, except the heaviest application of stable manure, can compare with this plan in its results. If the land be very poor the first crop will be very light, but light as it may be it will yet add a considerable portion of the elements of vegetable nutrition to the soil; and thus the second crop will be greatly improved, and the third will be all that can be desired. It is believed that in this way four times as much improvement will be effected in one season, as can be by means of clover in three or four years. For this purpose farmers in the north should use the tall kinds of southern corn, as being of more rapid growth and furnishing vastly more matter for the soil.

From the Southern Planter.

THE HAW OR HOOKS.

We had supposed that the absurd and cruel practice of cutting out the haw from the eye of the horse for the purpose of relieving a fancied disease called the hooks, had ceased amongst even the most ignorant of veterinary practitioners; but a gentleman assured us that the plan was frequently resorted to still in the country by those who should know better.

The haw is an expansive membrane with which nature has provided the eye of the horse for the purpose of removing the dust and other impurities that may chance to fall upon that delicate organ, and to cut it off under any circumstances, is not less cruel than ridiculous. This membrane, sympathizing with other diseased parts of the eye, frequently becomes inflamed and swollen, and then it is, that, instead of bathing it with cooling solutions, it is called the *hooks*, and is cut out by ignorant quacks; and thus the horse is deprived of this natural appendage, and is subjected to all the pain and misery that the introduction of foreign substances is calculated to inflict upon that sensitive organ, the eye. We would condemn the man

guilty of this barbarity to stand thirty minutes with a gnat in his eye, his pocket handkerchief stolen, and his hands tied; he would be then able to comprehend the extent of the misery he had inflicted upon an animal oftentimes nobler than himself.

It is true that the bleeding that follows the cutting, sometimes reduces the inflamation and gives some apparent countenance to this barbarous practice—but surely blood letting can be effected under such circumstances upon better terms than the loss of this valuable appendage.

Life's Lesson Should Be.

BY B. HALLECK.

Forget not—regret not
The joys that have fled
Though sweeter and fleeter
Than fresh odors shed
From the jessamine's cup,
Or the bright chalice hid
From the gaze of the sun
'Neath the violet's lid.

Forget not—regret not:
Hope ever should burn
The incense of love
In her funeral urn.
Shedding glory and light
O'er the gems of the past,
By time on the altar
Of memory cast.

Forget not—regret not:
Why should we regret,
While one star remains,
That another has set?
And though all may have faded,
Others brighter by far,
Through the gloom may arise
Than one once worship'd star.

Forget not—regret not:
Life's lesson should be
Like the stars that are hung
O'er the limitless sea,
A guide to our path,
Bright links of the chain,
To lead us and bind us
To virtue again.

AMERICAN NOTIONS.—The Journal of Commerce gives the following as an extract of a letter from Staffordshire, England:

"I wish you would send me the articles named below, at your earliest convenience.—Pray let them be of the best quality as I want them for family use. Say—

7 barrels Newton Pippins.
3 do Duchess County pork, same as the last.
2 do Brown crackers.
1 do Fulton market beef, same as the last.
3 boxes, each 1 large cheese.
1 barrel of cranberries.
4 do flour, with any other "*bonne bouche*" you can think of."

What an uncomfortable situation! A seat on a sofa between two beautiful girls, one with black eyes, jet ringlets, and snowy neck---the other with soft blue eyes, sunny ringlets, red cheeks and lips, both laughing and talking to you at the same time.

CONTENTS OF THIS NUMBER.

Overseers,	page 177—178
On the Improvement and Proffitable Cultivation of Clay Lands,	178—179
Cultivation of Lucerne,	179—180
Small Farms and Thorough Cultivation,	180
Economy of Farm Labor,	180
A New Fashioned Mattress,	180
New and Improved Cotton Gin,	181
A Recipe for Dr. Henkel's best Pies,	181
Cold Starch for Linen; Agricultural Publications; China Wheat in Maryland; Cure for Consumption; The Wool Trade; Eau de Cologne,	181
Subsoil Plowing,	181—182
EDITORIALS, etc.—Our Third Volume; Statistics—"a Georgia Overseer;" Texas Cotton Seed,	183
Improving Land by Green Manures,	183
The Haw, or Hooks,	183—184
Life's Lesson should be,	184

MR. AND MRS. CHAPMAN'S
BOARDING AND DAY SCHOOL.
No. 228 BROAD ST. AUGUSTA.

☞ THIS Institution has been under the direction of its present principals for six years, and the success which has attended it has enabled them greatly to increase the facilities it affords for the education of young ladies. Provision is made for thorough instruction in all the departments of female education, from the elementary English studies to the higher branches of literature and science. The next term will commence Tuesday, October 1st. Pupils can enter at any time during the term, and will be charged for the time they are members of the school.

Tuition $3, $12 and $15 per quarter, according to the age and standing of the scholar. Music and French at the usual rates. Board $15 per month.

REFERENCES.—Rev. C. S. Dodd, Rev. W. T. Brantley, Rev. G F. Pierce, Dr. W. H. Turpin, Mr. J. M. Adams, Mr. D. Hand, Augusta; Gov. Crawford, Milledgeville; Dr. E. E. Jones, Madison; Col. Wm. Jones, Warren; Dr. F. George, Jasper; Mr W. B. Munro, Columbus.
s26-w v C4t

POTASH.---A supply of first quality Potash, just received and for sale, whole sale & retail, by [o24-1m] WM. HAINES, Jr

TEXAS COTTON SEED.

THE subscriber offers for sale, Cotton Seed of very superior quality. The original stock was procured in Texas, and cultivated on his plantation in Newton county, for the last three years, with extraordinary success. The yield is much larger, and the quality superior to the Petit Gulph or other kinds of Cotton usually grown in this section of country.

Planters who purchase a supply of the seed may rely upon sufficient increase in product of the first crop to refund the outlay for seed.

Planters who take an interest in improvements of this sort, are referred to the annexed certificates, and the Cotton raised from the seed may be seen at the warehouses of Adams & Hopkins and Clark & Roberts.

JOHN W. GRAVES.

A supply of the above described Cotton Seed is offered for sale at the following places, at five dollars per bushel:

ADAMS & HOPKINS's Warehouse
CLARK & ROBERTS's do.
D'ANTIGNAC & EVANS's do.
HAND & WILLIAMS's Store,
} Augusta.
McKINLEY & MARTIN's Store, Madison.
HILL, MORROW & HILL's Store,
D. DICKSON & Co.'s Store,
} Social Circle

MADISON, October 29, 1844.

Dear Sir—I regret it was not in my power yesterday, when I saw you, to give you any opinion with regard to a small lot of cotton I have growing from seed presented to me last spring by my friend, John W. Graves, Esq. Since then, however, I have been to my plantation and made comparison of it with my crop of cotton, and now take pleasure in saying to you, it is a superior article in point of fineness and length of fibre, containing more lint on the seed, and will yield much more from the same quantity of land planted.

I am respectfully, dear sir,
Your obedient servant,
[Signed] WM. JOHNSTON.

Georgia, Newton County:

I hereby certify that I obtained from John W. Graves, of this county, a sack of Cotton Seed, (which he represented of superior quality introduced from Texas,) which I planted last spring, and find to exceed my most sanguine expectation. I planted it two or three weeks after my other cotton, (which is the Petit Gulph,) and notwithstanding the season was dry and unfavorable throughout the year, (the growing season) yet it is by far the best cotton I ever made. I think by the time it is all gathered, the best part will yield 2000 to 2500 pounds per acre. My neighbors who have seen it are of the same opinion. From the trial I have made, I believe it will yield double as much as my other cotton on land of the same fertility. [Signed] JACKSON HARWELL.
24th October, 1844.

Georgia, Morgan County:

This is to certify that I am neighbor to John T. McNeil, Esq., and that he last spring got a load of Texas Cotton Seed from John W. Graves, Esq., of Newton county, and planted them on what I consider average land of his farm; and from frequent observation of the crop, with his other cotton, (which is the Petit Gulph,) I do believe it will far excel any other cotton I have ever seen raised in this section of country. And I also believe that the staple excels any other I have ever examined, as to fineness and color.

[Signed] JOHN P. EVANS.

This will certify that I acted as overseer for Mr. John T. McNeil for the year 1844. My knowledge of farming induces me to believe that the Texas Cotton, raised by Mr. McNeil this year, is a very superior article, and with me preferable to any other cotton I have ever raised. It is of long and fine staple, and well bolled, and easily picked out, and has withstood a drought this year better than the Petit Gulph Cotton. It is, in a word, a valuable cotton. I have ginned eight bales of the Texas Cotton on Mr. McNeil's *Carver Gin*, and find that it yields one pound of clear cotton from three of seed cotton; and from my experience of thirty years in cotton growing, I have never raised any I think equal to the Texas Cotton.

[Signed] ALLISON KENT.

AUGUSTA, October 30, 1844.

John W. Graves, Esq.:

Dear Sir—Having been called on by you to make a statement in relation to your Texas Cotton, we take pleasure in saying, that for the last two or three years we have received at our warehouse your cotton crops. The quality has invariably proved very superior, both as to color and length of staple. On sale, it has always brought the highest market price. We consider it a very superior article in the cotton line.

Your obedient servants,
ADAMS & HOPKINS.

Mr. John T. McNeil:

Dear Sir—We have received the two bales of Texas Cotton sent by you to us, and take pleasure in saying that in color and length of staple it is superior to anything we have seen; and cheerfully recommend it as such as will always bring the highest market price.

Your obedient servants,
n5-wp&Ctf CLARK & ROBERTS.

BACON'S LARD LAMPS.—A new article, superior to all others for this purpose, emitting a good clear light without smell or smoke, and at an expense, counting Lard at 8 cents a pound, of about a quarter of a cent an hour.

These Lamps have been satisfactorily tested, and are recommended as "just the thing" for the use of planters. and all others who study utility, neatness and economy.

A supply of the above Lamps, with Fillers and Wicks for them. For sale by
HAVILAND, RISLEY & CO.
jy 24-d.c&Cultf

THE SOUTHERN CULTIVATOR
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☞ POST MASTERS are authorized to receive and forward money free of postage.

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☞ *All subscriptions to commence with the volume.*

SOUTHERN CULTIVATOR.

VOL. II. AUGUSTA, GA., NOVEMBER 27, 1844. No. 24.

SELECTIONS, EXTRACTS, &c.

From the Tennessee Agriculturist.

TO FARMERS' DAUGHTERS.

I again take up my pen in continuation of the matters on which I last talked to you. I wish to give you a few notions on the education I think most necessary for young ladies,—the effect it should have on the character, or rather the character it should form. If I were to ask you, who of your acquaintances are well educated, you would perhaps specify some whom you consider to be perfectly so. You will say such a one is pleasant and graceful in her manners, sings, plays, and dances in the most approved and newest style,—speaks French, draws, paints and needle-works to perfection, tells of Botany, Chemistry and Philosophy,—knows all the new fashions, has many beaux, and talks to them without the least bashfulness, or blushing. No doubt many of those accomplishments are pleasant and agreeable; and you will perhaps think me disposed to find fault when I tell you a woman may be possessed of them, and even more than you mention, and still, in my opinion, be entirely deficient in true and correct education.

If you inquire in what good education does consist? I answer, that it is not in that course of study alone, that enables a woman to count up her accomplishments, and display them on every possible occasion; but it is that training which improves the heart as well as the mind and manners; in a word, that tends to perfection of character, moral, physical and intellectual. An education that does less than this, is not correct education; it is oftener mis-education. Of what avail are all the accomplishments of earth, if our sex do not with them also possess those gentle and affectionate dispositions, that so much promote the happiness of those with whom they are connected? Do you think it affords much pleasure to a husband that his wife can at times, send forth notes of witching melody, while at others, when no stranger is near to listen, she can address him in the rough tones of anger and contempt? No, her music will never give happiness to his heart, it will never cause it to vibrate with pleasure or tenderness—he listens not to the song of the charmer, charm she never so wisely. Better had it been for her to tune her heart to the soft notes of constant affection, than for her voice to be skilled in the magic notes of song—sweet though they may be.

Then it is one of the most important parts of education that woman learn to govern her temper, to subdue every incorrect feeling and habit, and thus accomplish her *heart*, at the same time, she is improving her mind; and let me say in passing, that by cherishing amiable dispositions the countenance is also greatly beautified, and the voice made better. A soft low voice, coming from a heart full of kindness, is a lovely thing in woman. Let me say to you, that if you have no rule over your spirit, if you cannot school it to bear patiently the ills of life, you are indeed uneducated, even though you may have passed through the whole circle of science. Cleopatra, the ill-fated Queen of Egypt, early applied herself to the acquisition of knowledge, she spoke nine or ten different languages, and possessed every accomplishment in perfection; still she was far from being educated—she could not control her furious and headstrong passions—she could no more rule her spirit, than she could still the ocean's wild flood. Are you not acquainted with some whom you consider educated, who are too useless to attend to the every day duties of life, even if by so doing, they could relieve the cares of a sick or weary mother; you know some, who hate to go about and do good, who take no pleasure in helping a sick neighbor, or in alleviating the sorrows of the afflicted. If a woman's heart prompt her not to do all in her power to soothe the sufferings of her fellow-creatures, the first part of her character is uneducated—her affections are untrained, uncultivated. True education, then, according to my notion, is that training which teaches us to do our duty in life. It teaches us to be meek, humble and useful—never puffs up its possessor with pride, vanity or haughtiness; but enables us to act with ability and prudence in every situation; or, in other words, leads to the formation of pure and good characters.

Before I go farther I would say, I do not wish you to think I am opposed to any of the innocent accomplishments of the day. On the contrary, I consider them calculated to refine and improve the mind. My only objection is, that they receive more attention than matters of greater importance. In many cases, in our part of the country, the fingers receive more training than the heart—the heart that should be the seat of all the noble affections of humanity. I can point out mothers who urge upon their daughters the necessity of practicing on the Piano for hours every day, while by their example they encourage them in a course of deceit and insincerity—but I digress.

There is a part of the education of girls, I think, much neglected, although absolutely necessary; and that all should attend to it, is agreed by most reflecting persons. It is the part that relates to household concerns. I expect you guessed I was coming there soon. Now for those of you who intend never to be married, it does not make so much difference; but for all who have the least idea of being mistresses of families, it is most important you should early learn every thing you wish to practice in after life. You know, in music, without a great deal of practice, you cannot execute with skill and judgment—there will be many false notes, jars and discords. It is just so in the every day music of life; if you do not practice these by times, you will be apt to play out of time, there will be but little melody in your chords, and you will have discords that will last through the whole piece. I know girls who ought not to marry. They are as perfectly ignorant of domestic affairs as children. Some declare they would not know how to bake corn bread; biscuit are entirely above their ken, and as to apple dumplings I should think they are a good deal like George IV of England was. You know it was related of him, that he happened to see one, and was perfectly at a loss to imagine how the apple ever did make its way inside the crust. Some of these girls go to school, study many books, are fond of costly clothing and all fashionable doings; but as to anything useful, it is out of the question. I consider such women totally uneducated; and to those who are so unfortunate as to choose them as partners through life, they are a trouble and a ———but I will not say anything hard about the girls; they would do right if their parents would teach them.

I always advise my acquaintances never to marry girls who boast they cannot do this, or they cannot do that. It so clearly manifests a want of good sense and good education, that there is little prospect of future usefulness.

There is an old bachelor away off down east, talking in the Boston Cultivator about these matters. He advertises for a wife, and describes the requisite qualifications; and, although they are in poetical form, I will give you the old gentleman's cogitations. After other things, he says:

"I'd have—let me see—no, I'd not have a beauty,
For beautiful women are apt to be vain;
Yet, with a small share, I'd think it a duty
To take her, be thankful, and never complain.

Her form must be good—no art to constrain it,
And rather above than below middle size;
A something—it puzzles my brain to explain it—
Like eloquent language must flow from her eyes.

She must be well bred, or I could not respect her;
Good natured and modest, but not very coy;
Her mind well informed—'tis the purified nectar
That sweetens the cup of hymenial joy.

Her home she must love, and domestic employment,
Have practical knowledge of household affairs,
And make it a part of her highest enjoyment
To soften my troubles and lighten my cares.

No fortune I ask; for I've no predilection
For glitter and show, or the pomp of high life;
I wish to be bound in the cords of affection—
And now I have drawn you a sketch of a wife.

If any possess the above requisitions,
And wish to be bound with the conjugal band,
They will please to step forward, (they know the conditions.)
Inquire of the printer—I'm always at hand."

This bachelor, you see, accords with me in my notions of education. He wants a lady possessed of some practical goodness and knowledge; he wishes an assistant in the school of life.

In the same paper, there is another bachelor speaking of the same subject. He says:

"I want to know the inward state
And temper of her mind,
If she will pout, or rage, or fret—
Be gentle, or unkind.

If her discourse is calm and staid,
And judgment rule her life—
Nonsense may charm us in a *maid*,
But never in a *wife*."

From the old bachelors' beginning to speak out so plainly, there must be a scarcity of properly educated ladies. I hope, if you have not formerly thought of these matters, you will turn your attention to them, and strive to train yourselves by acquiring useful knowledge, and by putting it in practice, so that you may be well educated, or what is the same thing, useful and practical women.

I am so tired of writing, it ought to do you some good. If I ever should get rested, perhaps I will talk to you again some of these odd times. Your friend, LUCY.

From the Maine Cultivator.

NATIVE STOCK.

The principle seems now to be very generally recognized, that most cattle degenerate with a change of climate. In examining the statistics and general state of British husbandry at the present day, we shall find that almost every county in that kingdom, has its peculiar stock. This ap-

pears, in most instances, to be the original or "native" stock of the country, improved by judicious selection, or by crosses. So highly esteemed, indeed, is acclimation, that no judicious and discriminating breeder is ever found willing to discard the native stock, but rather prefers it as a *basis* on which to build. Few who are not familiar with the operation of the principles of breeding, as there recognized, can be aware how vast an improvement they are, in a short time, competent to effect. In our own country, cattle raising has never received the attention it deserves. While a few enlightened and enterprising individuals here and there have interested themselves benevolently, in "building up" and improving either by following the rules prescribed by their transatlantic brethren, or by the importation of blood stock from abroad, the stock of a particular locality —the great mass of our farmers have remained comparatively indifferent as to the result of their efforts, and disposed—so tenaciously rooted are certain *old prejudices*—rather to ridicule than approve. Every one is probably aware that so far as the production of good stock is concerned, the farmers of New England are not so much in want of material, as of information and discernment respecting breeders. Our native stock, in its pure state, is peculiarly active and hardy; it has all the benefits of thorough acclimation, and is to the full as capable of symmetrical development, under a judicious and radical system of breeding, as the Durham, the Hereford, or the Devon. There are certain distinctive traits, or points of form with which the experienced breeder associates, correctly, the qualities of activity and vigor in the ox; others which denote the presence of a lactescent propensity in the cow, and others again which bespeak a capacity to convert food into fat. Each of these marks are distinctly impressed, and as incapable of misconstruction by the eye of an experienced observer, as though the several characters they denote or symbolize were written on the animal's hide. It is, however, of little avail that we select our best animals for breeders so long as we persist in the old practice of selecting the best of their offspring for the market. This is an error that we wish greatly to see reformed. There is a degree of inconsistency in it, utterly incompatible with the character of the age.

From the Boston Cultivator.

HEN HOUSE.

Many farmers that keep hens complain that they do not lay in the season of the year when their eggs are in the greatest demand either for consumption in the family or for the market. It is well known that with all the attention that can be bestowed on fowls, that they will not lay so well in cold weather, and hence the high price of eggs at that season; yet much may be done to encourage the production of eggs in the inclement season, and frequently with profit too. Near a good market, one a week each, in the months of November, December and January, will pay for the food usually consumed by hens.

Though in some cases great pains have been taken to make hens lay in cold weather, and without success, yet this is not generally the case. Most persons that wisely manage in this respect, have very good success. Hens should be provided with a warm dry house; it would be well to have the house so warm that water would not freeze in the coldest weather, and when the weather is mild it should be well ventilated.

Last fall we gave what we consider the best plan for a hen house, and for the benefit of many new readers we will now repeat the substance of it in a few words. Make a house 6 or 7 feet high, 10 feet wide, and 10, 20 or 30 feet long, or longer, each length of ten feet forming a section. Divide it lengthwise into three parts of equal width; the centre of which will serve as a walk, and on each side to every ten feet will be a ward, which should be constructed as follows.—About four feet from the ground or the ground floor, make a flooring over the whole ward, excepting about ten inches square at each corner, by the wall, for hens to come up through.

Over this floor put two roosts, about ten or fifteen inches above it, according to the height of the house. On going up on this floor a hen can walk along and take an empty roost, and the manure should be frequently removed from the floor, and a little plaster, ashes, charcoal dust, or sand thrown on it, unless the manure is to be saved for morocco dressers. By adding a small quantity of plaster and charcoal dust to the dung, the ammonia will be fixed and good *guano* may be made. If the manure be not removed, the ammonia will injure the fowl's eyes, when closely confined.

On a line with the walk, and about thirteen inches under the front of the flooring, put a piece of board a few inches wide, with the edge up, extending from one end of the section to the other, for the front of the nests to rest on. On a level with this and one foot back from it put a board, one foot wide, flat side up, extending like the narrow strip from one end of the section to the other. Then make nests of light thin boards, one foot wide from right to left, that there may be ten to a section, and about thirteen inches high, and about the same from front to back.

These nests will rest on the edge of the narrow board, and go back and rest on the wide board an inch or two, then the hens can walk along on the wide board back of the nests, and take any one they please. The nests should be about six or seven inches high, excepting every second one should extend up to the flooring on the sides to form a division. They will be on the upper part at the back part, and the open space in front should be closed with a piece of board, to be removed for the purpose of taking out the eggs.

At each end a short piece of board should extend from the wide board named above, back to the wall, from which the fowls can go up through the flooring. Against the wall in the centre, there should be a piece of board, about fifteen inches from the ground, and from this there should be a piece at each end, extending up slanting to the two short pieces just named; on these slanting pieces there should be some cleats. Then the hens can occupy all the ground, or ground floor, without impediment; they can jump upon the piece by the wall and walk up the ladders and go along the wide board to any nest, or go up through the flooring and to any roost. This gives economy in room as the fowls can occupy the whole ground, then above it the nests, then the flooring and then the roosts, and a free passage to all, and the manure nearly all saved, in the cold season, and removed.

There should be a window in each ward, extending up about as high as the roost, and down to within a foot and a half of the ground. This may be taken out in summer for the purpose of ventilation. The fowls may occupy the walk, or it may be kept neat and clean, by putting laths from the flooring to the roof, and from the nest to the ground. Instead of building a house on purpose, part of a shed or other building may be finished off in this way as a section, or as a single ward, just by taking a place about three feet wide any desirable length. A hen house may be rendered warm by banking it up with common earth, and this can be done in favorable situations with but very little labor.

To make Yellow Butter in Winter.—Put in yolk of eggs just before the butter comes, near the termination of the churning. This has been repeatedly tried, and it makes very fine sweet butter. It is kept by many as a great secret, but its great value requires publicity.—*Cor. Alb. Cult.*

In an experiment in Maryland, in feeding hogs with shelled corn, and the same lot with half the quantity in meal made into mush, it was found that on the mush they increased five pounds more in a given time, than on the raw corn, and their coats were much better.

From the (So. Ca.) Temperance Advocate.

NEWBERRY AGRICULTURAL SOCIETY.

REPORT ON OATS, RYE, BARLEY AND BUCKWHEAT.

The Chairman of the Committee on Oats, Rye, Barley and Buckwheat, begs leave to Report—

That having been unable to confer with the different members of the Committee, he has perhaps been deprived of embodying in the Report, information that would have been of essential service; that such information as he is able to give for the preparation of these crops, he submits under their respective heads.

The peculiar situation of our climate—the partial failure of our Corn crop will necessarily direct the attention of our planters to these crops; the use which can be made of them renders them peculiarly valuable in the event of a scanty corn crop.

Oats.—This crop has generally been treated with less attention than it deserves. Old worn out lands, considered unfit for any other crop, are usually assigned to it; and it is not at all to be wondered at, that many persons are barely able to save the seed. Many contend that this is all that is wanted—the rest being pastured off by the stock; in this way they receive the full benefit of the crop. It should, however, be made a valuable crop, and better soil should be assigned to it, and better preparation. We have in the cow-pea, a most valuable article for the preparation of our lands for small grain, and as oats usually prosper best on a soil not too finely pulverized, they would receive the full benefit of such a course of preparation; and as in regular rotation of crops, small grain invariably succeeds a corn crop, the cow-pea should be bountifully cultivated with the corn crop, and this turned under as soon as the vines begin to bear; we would thus prepare our lands not only for crops of small grain of every kind, but for every other crop, and the soil instead of being impoverished would continue to improve. By turning under the pea-vines in the fall with a suitable plow, the ground will necessarily be put in excellent preparation to sow your oats, either in the fall or in February, as desired. This could not, under the general system of farming which prevails, be done with the whole crop, but such portion of it as would receive this course of preparation, would amply repay for the extra labor bestowed.

Fall sowing is to be preferred, as the oats are not so liable to be injured by the Spring drought; the yield is greater and the head much better than if sown in the Spring. When, however, it has been deferred until Spring, they should at all events be put in during the month of February. Cotton-seed, if applied then, is of more importance to this crop than to any other. The seed should be carefully plowed in, or if the ground has just been broken up, a heavy iron-toothed harrow would perhaps answer a good purpose in putting the seed to a proper depth. The old adage "dust in your wheat and daub in your oats," is not true with regard to this crop. It is as necessary that the oat crop should be as carefully put in as wheat, for when plowed in wet, a great portion of the seed is buried at such a depth, that the heat and air can never affect it, and it must necessarily perish, or the strength of the grain be greatly impaired by the time it reaches the surface, and before it can recover, it has necessarily to throw out a new series of roots near the surface; during this time it is exposed to the changes of the seasons, whereas, if put in at a suitable depth, the young plants would grow off vigorously. Baron Vogt, of Germany, has fully tested this, and has made a series of experiments to illustrate this important fact. At the same period after the seed were sown, those put in at one inch below the surface, had four healthy blades, while those at three and four inches had two, and at most three sickly leaves. These experiments should convince the most incredulous.

The selection of proper seed is also a subject of much importance. There are, however, some excellent varieties of oats cultivated among us. The Bremen or Potatoe Oats, is

preferred by some, while others prefer the Ruffled. The black and white Tartarian, although not yet cultivated among us, are said to be the best description for the poorest exhausted soils, producing more on those sorts, than any other variety.

Rye has been cultivated perha s as long as any of the varieties of small grain, and its cultivation is becoming a matter of increased importance, as it is found particularly adapted for grazing, furnishing the best early spring pasture we can have recourse to for lambs, young calves, and pigs. Care should be taken not to graze horses, cattle, and hogs upon it while young, and particularly while the ground is wet. It is not so easily pulled up by the roots, and is therefore better adapted to grazing hogs, than any other variety of small grain. If the intention is to pasture, it should invariably be put in during the month of September; it will then be fit to graze in February, at which time it will be particularly valuable, especially for ewes, with early lambs.

In our climate a bushel of seed to the acre is quite sufficient, this will give a good stand, which is of the greatest importance to a crop intended for pasture. For seed it may be sown as late as February. The peculiar aromatic substance, which has long rendered this grain grateful to the invalid, is found to adhere to the brush, and when bolted, it is found necessary to give it flavor to prepare it by making up a decoction, prepared from the bran. The same preparation is necessary for this crop as is advised for the oats. It will grow in dry sandy soils and produce a tolerable crop, and upon the whole it may be considered as preferring sand to clays; it is not so subject to freeze out as oats.

A new variety, which is called the Multicole Rye, has been mentioned during the past year in the Agricultural journals. It is said to be a native of Poland, and that it has been introduced into cultivation in France, with great success. The account given in the London Farmer's Magazine is, that it grows on common soil, suited to the old fashioned rye, but its habits are totally different. By the reports of above thirty Agriculturists, near L'Orient, who have cultivated it during the past two years, it does best in that climate, when sown in June. Its growth is most rapid; two crops of it are cut for hay before July, and by the 15th of August, a grain crop is reaped—the straw is from 8 to 10 feet high, and the head a foot in length. Should this account prove true, it will be of vast importance to us as a grazing crop, as its rapid growth, the length of time necessary to mature it, will render it much better than the common rye.

The Hon. H. L. Ellsworth, Commissioner of the Patent Office, has sent me a small quantity of this seed, which was grown in the District of Columbia, from seed imported from France—the grain is smaller than the common rye, but in his Report it is stated that the grain has improved in size when cultivated here, and in time it may prove valuable to us as a grain crop. Mr. Ellsworth deserves the thanks of our Agriculturists, for the zeal which he has manifested, in collecting valuable seeds for distribution, from all parts of the civilized world. His Report embodies a large amount of useful agricultural information, and he is making renewed exertions to render his report for the next year, still more valuable.

Barley has been cultivated from the earliest antiquity, and was much in use among the Romans, both as food for soldiers and horses. It is, upon the whole, one of the most valuable and important grain crops, which we can cultivate. It is almost invariably a certain crop, as from its early maturity it makes itself from the winter seasons.

For soiling cattle and horses it is superior to any other grain that we can have recourse to. When soiling is the principal object, it is advisable to sow at different times, from the first of October until the last of November; thus furnishing it in succession from the first of March until May. When young, it should be cut off carefully with a keen grass scythe, and raked neat and careful, and if the soil has been made rich, a second cutting can be obtained. It requires a rich loamy soil, and where this cannot be readily obtained, the ground must be made rich by supplying the necessary quantity of stable manure. Ashes is important to this, as it is to every other grain crop. Unless the ground is made rich, you can never expect to succeed with the crop; and as only a few acres are required for the purpose of soiling, even on the largest farm, the ground can readily be manured. Cotton seed applied liberally, is also an excellent manure. As soiling is the principal object, the spot selected for barley should be near, and convenient to the stable and cattle yard. Sow from a bushel to a bushel and a half to the acre. The ground should be deeply broken up, and the seed neatly plowed in; the whole should then be well harrowed, so that the ground is thoroughly and finely pulverized.

Buckwheat.—I regret that I have not been able to procure seed to make any experiments in its culture. From the growth of this plant, its small fibrous roots, and broad leaves, it necessarily draws largely from the moisture of the atmosphere for its subsistence, and will therefore succeed upon the poorest soil, thus affording an excellent green crop to be plowed in for the renovation of old and exhausted soils.

The rapid growth of this plant, its early maturity, would give easily two crops in the same season; for this object, the first should be turned under, as soon as it would furnish the necessary quantity of seed to insure a stand for the second crop. In addition to this, it deserves our attention as a grain. For the small amount consumed in making buckwheat cakes, we are altogether dependent upon the North for our supplies; scarce a bushel is raised in the entire State. When intended for a grain crop, it should be sown broadcast, at the rate of a bushel to the acre. Sow the last of June, and the first of July, and it will be ready to reap in two and a half or three months. It requires no other culture than to harrow in the seed, and if necessary, to pull out the weeds. As the seeds do not all ripen together, care must be taken when a grain crop is desired, to cut it at such time, when the greatest quantity of seed are matured. From the succession of blossoms, this plant affords a rich repast to bees, and on this account is much prized in France and Germany. The seed are considered superior food for poultry. There can be no doubt but that it will succeed admirably in our soil and climate, and I trust the experiment will be tried, both as a grain crop, and as a green crop to turn under for the improvement of our soil.

All which is respectfully submitted.

WM. SUMMER, Chairman.

ON POTATOES, SWEET AND IRISH.

Your Committee met agreeable to appointment, and after conferring together, beg leave to report as follows, viz: For sweet potatoes, we prefer a light grey or sandy soil; if it should be pretty well spent by cultivation, it would be well to cow-pen or manure it broadcast. We prefer hills to ridges, and like to plant pretty large seed, of which we put but one or two in a hill. If the seed is small, there should be two or three put in the hill. When the potatoes are well up, the hills should be scraped down carefully with a hoe, and let lie some ten days or two weeks, then run two furrows with a plow each way across the bottom of the hills, and draw up the loose dirt pretty well to the top of the hill, and so lay them by, as nothing more is necessary in the way of cultivation.

P. S.—Plant about 10th April.

Irish Potatoes.—We prefer the same soil as above stated. Break it up well before you plant. After you have your land well broke up, lay off your rows three feet wide, with a good shovel plow; plant your eyes after having cut your potatoes, about eight inches apart, then fill up your furrow pretty well with light (or loose) stable manure, hog hair, or cotton seed, then throw a little mould on the top with a hoe or plow, then cover the whole patch over about 18 inches deep, with wheat straw, oak leaves, or pine needles, and you have done all that is necessary to make good potatoes, and plenty of them, if the season suits.

All of which is respectfully submitted.

MATTHEW HALL.
JAMES H. MOFFETT.
GEO. BROWN.
ALLEN LESTER.

From the (S. C.) Temperance Advocate.

NEWBERRY AGRICULTURAL SOCIETY.

REPORT ON TURNEPS.

The Chairman of the Committee on Turneps, begs leave to report: That he has conferred with the other members of the Committee, and all agree with him in the same necessary preparation, and the great importance of the Turnep crop.

The soil best adapted to turneps is that of a sandy loam. In favorable seasons very good crops may be raised from any kind of soil; but to insure success sandy land should as a general rule be selected. The ground should be made rich, either by applying the necessary quantity of manure, with a good portion of leached ashes, or by cow-penning. Where this is properly attended to, and the stock regularly pruned from the time seed is gathered, until August, we think it best. The ground should be broken up to a good depth every month, from the time you commence penning your stock, until you are prepared to sow—to get in a good tilth. Every alternate plowing should be crossed, so as effectually to break up every portion, and if rough, a heavy harrow should rapidly pass over it—for it is to be remembered, that the perfect preparation of the soil is of very great importance to the future crop.

The soil should be mellow, deep and fine, before the seed is sown, the roots will grow more readily, they will be better prepared to stand the drought, and the young plants will grow off rapidly. The ground being in good condition, sow broadcast, the necessary quantity of seed, and harrow them in with a light harrow, or with a suitable brush. We have tried both and can discover little or no difference, with this exception, that where the ground is rough, the iron-toothed harrow is to be preferred.

For early use, sow the last of July or first of August. The main crop should, however, be sown about the middle of August. We have observed, when sown earlier than this, and a drought succeeded, that they do not grow off well, and the turneps, even if good seasons should follow, are never of good size and flavor. This is avoided by sowing later, and with proper after-culture, you will have almost invariably a good crop. If sown broadcast, as soon as the plants have leaves an inch broad, hoe and thin them, so as to leave the young plants 10 inches apart, cutting up all the grass and weeds and thinning carefully.

There are many excellent varieties of the turnep, in almost every neighborhood, but when you have to purchase seed, the Swan's Egg, Dale's new Hybrid, White Norfolk, and the large yellow Globe, are the best for table use. For *early* table use, the White Flat Dutch, and the Yellow Stone, are to be preferred.

The Ruta-baga, as a table turnep, is by many preferred during winter, to any other variety. It will continue fit for use more than a month later than any other—and in our genial climate they can be taken from the ground as required for use.

The soil particularly adapted to them is that of a deep sandy loam. The ground should be deeply plowed and put in good order, as that above recommended for common turneps. They should be sown the last of July or first of August, in drills from a foot to eighteen inches; and, as soon as the plants appear of tolerable size, thin them to ten inches in the drill, at the same time give them a good working with the hoe—a second working should follow in two or three weeks, which will usually make the crop.

Care should, however, be taken to draw up the earth around them as they begin to grow above the ground. They have been grown on my place the past season, of fine size; the season, as will be remembered, was a dry and unfavorable one. They possess more nutriment, and are superior to the common turnep for milk cows, imparting little or no flavor to the milk and butter, and as I am satisfied from experience, that they will succeed, I would urge their cultivation upon the members of our Society generally.

Respectfully submitted.

JOHN SUMMER, Chairman.

REPORT ON CATTLE.

The Chairman of the Committee on Cattle, respectfully submits the following Report—

The condition of this portion of our stock, renders it highly important, that a report should annually be read before our Society; and that no neglect should be attributed on his part, he submits such information as he has been able to collect:

When we consider the important part, which cattle form in our domestic economy, we ought to be induced to give them all the care and attention, which they require. Instead of this, we too frequently find that neglect, almost utter neglect, is their lot.

Whoever intends to commence the work of improvement in stock, must first direct his attention to the introduction of a good breed: for any person, who will lay aside prejudice, will perceive at once that the improved breed, which has been introduced among us, is much superior to the common stock of the country. Although in many instances, gross imposition has been practiced upon the community by our stock-driving neighbors, in introducing an inferior breed of cattle, for thorough breds, yet it has been the means, by resorting to the pure blood, of furnishing a cross, which in time, with a judicious course of management, will produce an excellent race of cattle. In recommending a breed for this purpose, I feel confident that for the general improvement of our stock, the full bred short horn will prove the best. It will improve their milking properties, and give them size and an aptitude to fatten more rapidly. It will improve them in the points essential to good beef cattle, giving them lighter heads and necks and better hind quarter—giving them weight in the proper points—points all desirable in meat cattle. A. B. Allen, of New-York, contended, that it was useless to import Ayershires, at a high price, when they could, by breeding their best milkers of the common stock to short horn bulls, produce animals of the same qualities at a trifling cost. It is true we have not as good common stock, as those to which Mr. Allen alludes, as they are remotely descended from the Herefords and Devons; but the experiment has already been commenced by a member of our Society, (Mr. Wm. Summer, of Pomara,) and the calves need only be seen, to be convinced of the great benefit to be expected from this cross. The milk-cow requires a generous supply of suitable food, if you would have her give a regular supply of good, wholesome and nutritious milk, which is all important in making the best quality of butter. Corn meal, shorts, wheat bran, with peas, pumpkins and turneps, in their proper season, furnish the principal food. An important article of food has been almost wholly neglected; I allude to *corn stalks*. There are many stalks in old land which scarcely produce a shoot; these should be gathered when the fodder is usually taken, or before, and cut up on cutting machines, (the improved machines which are made durable, answer an excellent purpose,) and a regular supply given every day: the tops of corn, even after the fodder is taken off, should be fed in this way, as it will give a large quantity of food, which if left to die upon the stalks is wholly lost. In the north, many farmers, who own extensive herds of cattle, keep them stabled during summer, and soil them upon corn stalks, sown expressly for this purpose, either thickly in the drill, or broadcast upon land well prepared: the stalks grow up slender, and when the tassel appears, it is cut of at the ground, and an enormous quantity of food is obtained to the acre. As it is by being sown thickly prevented from sending out shoots, it is rich in saccharine substance, and when fed green, or in a cured state, it furnishes superior food for cattle and horses. The attention of our friends, I trust, need only be directed to these things to give them a fair trial. Pea-vines furnish also an excellent article for soiling. During winter a good turnep crop is all important to cattle of any description. For milch cattle the rutabaga is to be preferred, imparting little or no flavor to the milk; it is moreover rich in nutriment, and with suitable culture, succeeds well in our climate; the turneps should always be washed, before being fed. Shelter is another requisite of importance for the proper rearing and keeping of cattle. Cows require shelter, more so than that of the horse, and at all times during bad weather, it should be within their reach;—under this, in suitable troughs, they should be furnished with salt; suitable racks should be put up to feed them in, and to prevent waste. The calves designed for breeders should have good attention; a regular supply of milk for four months at least should be allowed them; the better to do this they should be early taught to drink from the pail, and by giving them skimmed milk you obtain the cream, and they thrive equally as well, as if suffered to draw from the teat. They should have access to good grass pastures in summer, and rye pastures in winter and Spring, with a portion of good hay and a small quantity of corn meal daily. They should be regularly stabled, and in rainy weather, kept stabled during the day, as the cold rains are very injurious to them while young. Young cattle should have, during winter, a regular supply of turneps, with their dry provender, and by this means they are kept in a much more healthy condition, than if confined to the latter food, and continue to improve through the whole winter, instead of pining away, at the time when green pasturage can no longer be had.

In conclusion we would urge the attention of the members of our Society generally, to the improvement of this branch of their stock, conscious that they will be amply repaid for the care bestowed.

All of which is respectfully submitted.

G. T. SCOTT, Chairman.

REPORT ON SHEEP.

Your Committee on Sheep beg leave to Report:—That they consider the raising of this article of stock, at this period of our political history, of no little importance to the agriculturist in the South. Twenty years ago, when cotton was selling for from 16 to $25 per 100 lbs., and the duty to which imported goods for ordinary wear were subject, was comparatively low, the cultivators of the soil might, they think, with some propriety, have taken from the proceeds of the sale of their cotton crop, a sum sufficient to buy wherewith to clothe themselves and their laborers. Since that period a great change has come over us—such an one too, as renders it necessary that every farmer should, in the opinion of your Committee, cultivate all his resources. The raising of sheep, therefore, in their opinion, should not be neglected, as in their fleece we obtain a raw material which they alone yield, and from which fabrics are manufactured wholly indispensable.

Your Committee have had little or no experience in the improvement, which they have no doubt would result from crosses with the Southdown, Bakewell, Saxony and Merino—and must, therefore, confine their remarks to what they conceive to be the treatment necessary for the native breed of sheep.

At the commencement of cold weather, say middle or last of October, your Committee find it necessary to commence feeding sheep. Sheaf oats, corn and fodder, hay or husks, are good. Green pastures of rye or barley, (if they have been prepared,) will in some degree supercede the necessity of feeding; and they think important to the well doing of sheep. In the absence of green lots they should be permitted to browze about in old fields, about branch sides and in wood pastures in dry weather, in addition to the feed they receive. Ewes, at the time they bring forth their young, should be carefully kept from among hogs, or the lambs will be destroyed by them. Lambs, when young, are quite tender, and should for a few days have special attention, and they with their dams should have shelter provided for them during severe weather. About the middle or last of March, all may be turned to grass. It is thought they are more healthy when kept on short grass, as long grass will frequently produce scours and destroy many.

Shearing should be done about the full moon in May. If shorn earlier, their numbers are liable to be thinned by the effects of cold. Shearing in the fall, they think should not be done. They find the use of tar a pretty good specific against the effects of cold. It may be applied to their noses, and occasionally a small quantity forced down their throats. It will also answer to keep the trough or plank, where they are salted, well smeared with tar, and their salt placed on it. They should be carefully salted once a week the year round.

As a preventive against the depredations of dogs, one of your Committee has adopted the plan of pasturing his sheep with his cattle, and herding them together at night. On the dogs attacking the sheep, they fly to the cattle, and are effectually protected by them.

When the sheep are kept up all summer, they should be frequently shifted from one pasture to another. Sheep are very fond of herbs, such as found in the woods; and which your Committee think, tend to keep them in a healthy condition. A body of woods inclosed with their pasture, might be of service to them.

All of which is respectfully submitted.

P. HAIR, Chairman.

Newberry Dist., (S. C.) Sept. 25.

PLANTING TOO MUCH COTTON.—The following remarks, says the Savannah Republican, from the Hamburg Journal are not a whit the less sensible because briefly and plainly expressed. Our planters would indeed do well to reflect seriously upon this subject. Pursuing their present course of overproducing cotton, they ought not to anticipate anything but short prices and pecuniary embarrassments. The result of the recent election, by increasing the probabilities of annexation, and the enlargement of our cotton producing territory will only tend to aggravate these evils. Depreciation of the prices of both lands and negroes, and ultimate ruin must be the result, unless the difficulty is met, as was suggested, by a diversion of labor. The Editor of the Journal, says:

"Planters of the South, can you raise cotton at present prices? If the great improvement in agriculture of late, and the cheapness of labor, will warrant the pursuit of this employment, well and good; but if, on the contrary, this is not the case, you should reflect on the matter, and cast about for a more suitable investment of labor, capital, and time. You are aware that the western lands, and those of Texas, will repay the planter more at five cents or even less, than our lands will at six cents; and yet you drive on in one long train of toil every year, without counting the cost of these things.

"What then is to be done, you will ask?—Plant less of the staple, raise more provisions, live more at home, improve your lands and stock, and let your farms present an appearance of industry, thrift, and plenty. This is a great country, and all we have to do, is to use exertions in making it beautiful, and ourselves happy and independent, as much as possible, of other countries. Be sure that you have a sufficiency at home, and then send off the surplus. Patronize home industry in all its various branches, and then we shall become a thriving and contented people."

For the Southern Cultivator.

POTATOES.

Mr. Editors—I have been of opinion for several years, that the potatoe crop was too much neglected in this section of country. The crop that I have made this year, has confirmed me in that opinion. I planted a fraction more than two acres. Three-fourths of the land was of second year's tending, and was so full of roots and stumps that we could not prepare it for planting to my satisfaction; but after breaking up the land a time or two, the rows were run off in a horizontal position and beds thrown up with a turning plow, then a hand with a hoe made holes for every eighteen or twenty inches, in which the seed were dropped and covered—these were of the Spanish kind. The land is thin grey soil; growth post-oak and black-jack intermixed with pine. The other fourth of the ground planted, is old grey land, on which cows had been penned. This, and a small part of the fresh land, was planted with yam-slips. (I here remark, that I have found out long since that the richest land is not the best for potatoes.) We hauled home and put away six hundred and forty bushels, and I suppose there were fifty bushels left on the ground for the hogs to get, and we must have dug at least ten bushels previously for table use, &c. At this, my crop from a little over two acres, is seven hundred bushels; but I will take it at 600 bushels, which at 20 cents per bushel, amounts to $120. The same land in corn, under the most favorable seasons and best mode of culture, could not have made more than 80 bushels, that at 38 cents per bushel, (which is the settlement price,) amounts to $30.40. I will allow $10 for the value of labor (*which is more than enough*) expended on the potatoes, more than would have been required on the same land had it been in a corn crop; and will allow $5 for fodder that might have been produced with the corn. At this calculation, there is a balance left in favor of potatoes of $74 60. I may have priced the potatoes too high, but will leave it to the readers of the Southern Cultivator to put their own prices on each article—make their own calculations—draw their own inferences, and come to their own decisions as to the propriety of our planting more potatoes than we have heretofore; and what we do plant, be sure to cultivate well, as they are a crop that is well worth our attention, if they were but to feed our stock on. They will fatten a hog quicker than corn; and for fattening an old ox or cow, I have never found their equal; as a change of food and for milch cows, there is scarcely anything better; and for children, both white and black, they are the most healthy food we can give them.

I am, sir, yours respectfully, &c.,

JOHN FARRAR.

P. S.—I will say to you, that I seeded two small lots in red clover and blue grass, about a year ago. As yet, they do not promise any big things. The clover, on a part of one of the lots, seems to be doing well, which is on the stiffest part of the land. On the softest part, the hot summer caused the most of it to disappear. There is a tolerable good stand of grass. Another year will prove whether it will succeed to much advantage. I have ordered one of *Low's crushers*, from Nashville, Tennessee. You have seen some account of it in the Tennessee Agriculturist; and there was an extract respecting it in the Southern Cultivator some time the past summer. When I get it home and put in operation, I will give you some account of its performance and utility. The present year has proved to me that potatoes do not require as much rain to make a good crop as I have thought they did, as our ground has not been wet but twice since July.

I saw a potatoe the other day, at a friend's, that weighed, in my presence, eight pounds—it was of the red skin kind. A yam of the same size would weigh, I expect, ten or eleven pounds.

STANFORDVILLE, Putnam Co., Ga., November 16, 1844. J. F.

From the Albany Cultivator.

CONTINUANCE OF MILK IN COWS.

Messrs. Editors:—It certainly would be a very great advantage to those who wish to keep a cow or cows, solely for their milk, if any feasible method could be adopted by which cows could be made permanent milkers, or their owners particularly those who live in cities, be saved the trouble and inconvenience of their breeding. There are two ways in which this seems practicable. The first method is to keep the cow in milk, from the bull, by constantly stabling her, after her first and second calf, and in this state, milked regularly and well fed, she will continue to give milk for two or more years. She usually ends, however, by beoming too fat for profit as a milker, her milk gradually failing, and she then goes to the butcher. The large dairies of London, have their cows treated in this manner, and in practice it is found far preferable to the old one, of having them "*come in*" annually.

There is another method of obtaining constant milkers which has been extensively practiced in France, and known to some extent in this country. This is by *spaying the cow* some four or six weeks after calving, and thus by preventing impregnation, securing the cow in milk for several years. In the London Veterinarian may be found a paper by M. Rogere, of Bordeaux, in France, who had for many years been engaged in a series of experiments on this subject, that had been eminently successful. The cows operated upon were of various ages, some quite old. The operation of spaying was followed with a restricted diet to prevent the tendency of inflammation. This had the effect of reducing the quantity of milk for a few days, but the flow soon returned, and continued unaffected for a long time. No danger was incurred by the operation when skilfully performed, and when from age or failure of milk, it became desirable to make beef of the animal, she was found altogether superior for that purpose to the unspayed ones.

In one of the earlier volumes of Ruffin's Farmer's Register may be found a paper on spaying cows or heifers, not only for milk, but for feeding. Mr. Tabb, of Virginia, under whose superintendence the operations were conducted, confirms the representations made of the value of milch cows so operated upon, but thinks it not less essential or important where cows or heifers are to be fed. The following extract is from Mr. Tabb's paper:—"The operation is performed on heifers not intended for milk when they are about a year old, and with the single precaution of keeping them entirely from food or water during twenty-four or thirty-six hours previous—is not attended with the least risk—is performed in the same way, and may be done by any person in the habit of spaying pigs. They go to their food immediately after, and require no attention. We select the most indifferent heifers to spay, which is one way to improve the stock. You increase the size amazingly. They gradually become as large as ordinary oxen—are easily kept—make the finest beef—and as they are not in perfection until six or seven years old, we work them after three or four, to make them gentle, and for that purpose, consider them superior to the ox."

The practice of working milch cows is common in Germany, as appears from the accounts of various travellers in that country; and teams of spayed heifers have carried off prizes at the plowing matches of Agricultural Societies in England. The suggestion made above, by Mr. Tabb, as to the practice of spaying having a good effect in the improvement of stock, is an important one. If the breeders of stock could so far forego the hope of immediate profit, as to be willing to submit all inferior heifers to spaying, it is evident the chances of breeding inferior animals, would diminish rapidly.

Mr. Winn, keeper of an extensive hotel at Natchez, communicated to Judge Peters, of Pa., the result of experiments made by him in spaying cows for the purpose of securing permanent milkers. It appears from the paper as given in the Transactions of the Pennsylvania Agricultural Society that he had two cows, which after being spayed, gave milk constantly for three years each. He preferred cows that had produced two or three calves, as the bags of such would be more capacious, than if spayed after the first calf. I hope that some of our breeders or farmers will try this experiment, since if successful, there can be no doubt such cows would command greatly advanced prices in places where cows are kept for their milk alone.

Ontario, Oct., 1844. A FARMER.

"Much increase is by the strength of the ox." [PROV. XIV. 4.

The following in substance, is Dr. Adam Clarke's *just* commentary on this passage of Holy Writ. The ox deserves more consideration than he usually receives, for the reasons here so correctly given: "The ox is the most profitable of all the beasts used in husbandry. Except merely for speed, he is superior in almost every respect to the horse. 1. He is longer lived. 2. Scarcely liable to any disease. 3. He is steady, and always pulls fair in his gears. 4. He lives, fattens, and maintains his strength on what horses will not eat, and therefore is supported at much less cost. 5. His manure is more profitable. And, 6. When he is worn out in his labor, his flesh is good for the nourishment of man, his horns of great utility, and his hide almost invaluable. It might be added, he is almost no expense in shoeing; and his gears are much less expensive than those of the horse. In all large farms, oxen for the common purposes of labor, are greatly to be preferred to horses. Have but patience with this most patient animal, and you will soon find there is much increase by the strength and labor of the ox."

PRESERVATION OF PUMPKINS.—This fall let every farmer gather as many of his best matured pumpkins as will suffice to supply his stock with a mess daily through the winter, and deposite them carefully in a close and secure repertory, according to the following succinct and definite rules: 1st, lay a stratum of butts of straw from the threshing floor, one foot thick; on this stratum deposite another of pumpkins, and cover them carefully with another layer of straw, and so on to the end of your heap.

In this way, pumpkins may be preserved most of the year, as sweet and fresh as when taken from the field. Try it, friends, and not leave every thing to be discovered by accident, as is the case with experiments in agriculture generally.—*Maine Cultivator.*

"GOING THE HOG" WHOLLY.—An establishment, calculated for the slaughtering and packing of 100,000 of the swinish multitude—we mean those that go on "all fours!"—the present season, have been provided at Madison, Indiana. There will, beyond dispute, be a "great cry there, but precious little wool!"

OBSERVATIONS TO PLANTERS.

The following admirable hints we find addressed to the planters of South Carolina, by a correspondent of the Southern Agriculturist. We wish that they might reach and be heeded by all; for it is certain that the stock of cotton on hand in Europe is fearfully accumulating, and that so long as this process is going on it must continue to fall. There is no escaping this dilemma, and the sooner our southern brethren look this matter in the face and provide for it by a change of system, the better it will be for them. We hope they will take these observations kindly, for they are kindly meant:

"There is a partial if not complete remedy for this evil, which I take the liberty of suggesting through your pages. Let every cotton planter make it a rule and adhere strictly to it, to make no more cotton than he can make clear of his plantation expenses. That is, let him pay all his plantation expenses by other crops, and make only so much cotton as will support his family, pay his debts, and add to his property. Many planters I dare say will answer, that they would be glad to make enough cotton to pay their debts and support their families. This may be true as to some, but in general it would be more pert than true. Even those who are hardest run, purchase corn, salt, negro cloths, &c., with 'cotton' money. I doubt if there is any planter who could not produce enough for market, beside cotton, to pay for all these things, and all plantation expenses. Some are so situated, that they could sell corn alone sufficient for the purpose. Let them increase their corn crop then to that amount and diminish cotton. Others again, if the corn could not be sold, might feed it to stock and sell that. It will bear transportation, and there is a great deal of foreign beef and bacon sold in the cotton region. Wheat and flour in the middle and upper country, could be made to pay these contingencies. Rice will grow at the foot of the mountains and command a good price, and so will tobacco. Many could pay these expenses by cutting timber and making shingles, staves, &c. In short, there are few planters in the whole cotton region, who might not by a little diversion of labor, manage to make what cotton they do, clear of the expense of production, and do so profitably. Let each planter look around him, and see what his resources are. I do not invite him to make his own shoes, hats, blankets, clothes, salt and iron. In most cases, others who are in these lines can make these things and bring them to his door cheaper than he can make them himself. But he can follow the business he understands, or at least is best prepared to carry on, and make something else besides cotton to pay for them.

"I know the folly of recommending any measure to planters, requiring their combined action. I recommend this to each planter for his own individual advantage, as well as for the sake of the whole. While it will diminish the aggregate crop, if it curtails but a bale, it will teach each man to be independent, to a certain extent, of cotton speculators, open his eyes to his own resources, and gradually prepare the way for that change of culture which is inevitable, and at hand, for all those who can not make a heavy bale to the acre. And I would add, that every planter should as speedily as possible reduce his culture to such land only as will make a heavy bale per acre. If he has no such, let him 'make' it—manure will soon do it. Cut down the cotton, increase the corn and pea crop, pen hogs, cattle, and every thing else on straw, muck, weeds, &c., &c, and he will soon have as much land that will raise him a bale to the acre as he wants, if he makes no more cotton than he makes 'clear.'

"I preach no more than I practice. I am a middle-aged planter, and I have nearly always made my cotton crop clear. I have suffered my share in the hard times, and have met, I think, more than my average of losses: yet I kept above board without any stringent economy, mainly because I have paid plantation expenses by selling corn, peas, oats, &c. My expenses have been as heavy as any planter's of the same force, and my land probably as poor; yet I have kept up chiefly, I think, because I did not have to pay them in a lump at the end of the year out of my cotton, which would have left me so small a surplus, that probably I should not have thought it worth taking care of. The balance would have been mere odds and ends, which few know how to make tell. I have made corn, &c., supply my odds and ends of cash, and appropriated them as they came to hand to pay current expenses; and when my cotton came in, I could do something with my little LUMP of CLEAR MONEY. Let me say also, that after next year I shall not plant an acre but will (or at least ought to) yield me 400 lbs. clean cotton. Not one—and not many I trust next year. Yet my land in its best natural condition, will not average half that much. What I adopt for my own good, and experience has proved to me is for the good of every planter, both individually and collectively, I recommend others to try."

From the Massachusetts Plowman.

THE BEST COWS.

You cannot be absolutely certain, when you purchase heifers, that you will have good cows, but by close attention you may acquire the art of judging pretty accurately whether they will prove good. The first point is the udder; if this is not capacious or if it has not the power of becoming so, she will never be a great milker. Then the *color* of the skin is important if you would have rich milk; it should be yellow, or rather a mahogany color; but you want good teats too to draw the milk; large teats, not standing close together are a good sign. These are the most important points.

As to the form of the cow, you will not choose a large head and horns, for it costs too much to support them; nor long legs, to made you hold the pail up from the ground, and to require high fences. Long legs require too much support, they are not good even for travelling. Choose short legged animals whenever you have the choice, whether cows, oxen, horses, or hogs. Choose slender necks and tapering tails; straight backs and broad briskets, for such feed better and are less liable to disease The cow's *body* should be large in comparison with her head and limbs, but it is not an object to keep very large cows and oxen, or horses on our farms, as a general rule. Middle sized cows, and those below it, you will almost always find better milkers than large cows are.

In regard to the color of the body, a red, or yellow, or yellow brindle, is as indicative as any, of a good rich milker. You cannot always determine, by any external marks, whether your heifer will prove a good cow. After trying her one summer, you can tell better, and you can then turn her off for beef if you choose. On purchasing you will have some regard to color as a matter of fancy. Nobody wants a black cow or a white one; and though partly colored cows are endurable, no white man buys a skunk colored horse for his own keeping.

Mild and gentle cows are better than irritable animals, and will be more ready to yield their milk. By close scrutiny you can determine in some degree by the countenance and the motions of the heifer, whether she is naturally docile; yet very much depends on her breaking, her treatment and education during the first season. Vicious treatment will make any animal vicious; still there is a difference of character independent of education. Examine the eye and the face of the heifer; a large mild eye, with a yellow circle or halo around it, is a good indication. The face should not be large, and the bones should all be small in proportion to the body. A large chest is evidence of good lungs and of a hardy animal. The hips should be well spread, for obvious reasons.

By proper attention to selecting and breeding we may just as well have a race of cows that will yield ten pounds of butter per week as five pounds. We know of no neat stock superior to our red Devon cattle; such as we meet with in all parts of New England.

From the Boston Journal.

THE OLIVE.

The olive tree has been prized in all ages in certain regions of the globe. Indeed there is perhaps no tree or vegetable which is more frequently referred to in profane and sacred history, and connected with which are more interesting associations. The dove sent forth by Noah from the ark returned with an olive leaf, by which the patriarch knew that the waters had abated. And it was probably from this circumstance that the olive has ever been regarded as the emblem of peace and of plenty by all civilized nations, heathen or Christian. In the fabled contest between Neptune and Minerva, to decide which should give the name to a new city, each sought for the gift most beneficial to mankind. Neptune brought forward the fiery war horse, but Minerva produced an olive tree, and the palm was awarded to the goddess—and she gave the name of Athens to the new city.

The olive tree appears to have flourished in Syria from time immemorial, and is frequently alluded to in the Holy Scriptures. It is supposed to have been transplanted into Italy during the palmy days of Rome, and was soon cultivated in France and Spain. For ages it has abounded in the south of Europe being much valued by the inhabitants, who use the oil for culinary and other purposes—indeed it constitutes a very important article of food among the inhabitants, and is a well known commodity for commerce.

The olive tree is not remarkable for its beauty or majesty. It usually attains a height of twenty or twenty-five feet, but branches off horizontally a few feet above the ground, like the apple-tree. It bears fruit abundantly every other year, the character of which is well known. The wood is heavy, compact, fine grained and brilliant, and is much used by cabinet makers in the countries where it abounds. It was regarded by the ancients as highly valuable on account of its hardness and durability.

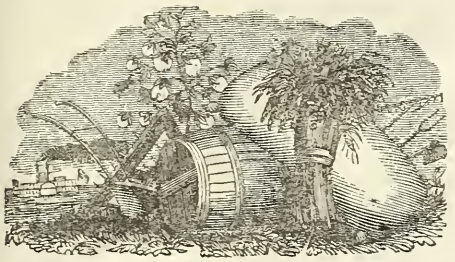
The oil is expressed from the pulp, not from the seed, as is the case with almost all other kinds of oleaginous vegetables. When intended to be picked for exportation, it is gathered while still unripe, and is steeped in the water several days, and afterwards put into a water of lye and barilla. It is then put in bottles or barrels with salt and water, and is exported to other countries, where it is regarded as a luxury, and is believed to be conducive to health and a promoter of digestion.

Whether the olive tree can be made to flourish in any part of the United States to an extent sufficient to give it any considerable value, remains to be seen. Mr. Ellsworth, the Commissioner of Patents, says it may be cultivated in the southern States as far south as the Carolinas. The climate of the southern part of Georgia, of Florida, Alabama and Louisiana would doubtless be suitable for its production, were it not for the very sudden changes from very warm to comparatively very cold weather, which sometimes take place in the winter months. The subject is worthy of attention. The experiment should be fairly tested, and there can be little doubt of its success. Indeed, so far back as the middle of the last century, a band of adventurers from the shores of the Mediterranean planted olive trees in Florida, where they flourished and grew to a large size. We are glad that attention is directed to the subject of increasing the number and the value of useful productions in this country.

Pick carefully all winter apples for sale and for use, and save all other apples for pigs and other farm stock, for which they will be found very valuable in winter.

Feed all fattening animals with perfect regularity—enough, but not too much. Save all your straw well for litter and winter feed.

A writer in the Michigan Farmer, recommends buttermilk for the destruction of lice on cattle.



WEDNESDAY, NOVEMBER 27, 1844.

OUR PROSPECTUS.

FRIENDS AND PATRONS! below we spread before you the Prospectus for our THIRD VOLUME, in which we announce the connection of Mr. JAMES CAMAK, of Athens, as the future Editor of this Journal. His fame as a man of science, and a writer of distinguished ability, who has devoted much time to the science of Agriculture, is too familiar to every Southern man to require commendation of his merits at our hands.

We have, therefore, only a few words to address to the friends of Southern Agricultural Improvement—and we shall not only be brief, but *plain*. To obtain the services of an Editor of such acknowledged ability, we have been compelled to contract a heavy responsibility; and we look to our friends to stand by us in our effort to promote this great and glorious work of Agricultural Reform. The price of subscription is too small to authorise our sending out agents; we therefore rely upon the friends of the work to constitute themselves agents in their respective counties and neighborhoods, to obtain subscribers. To excite a generous rivalry, we have adopted the plan of offering a list of premiums to those who shall obtain the greatest number of subscribers, between now and the first day of March next. This is a novel enterprise at the South, in the history of an Agricultural periodical, but we trust it will be the means of exciting our friends to an effort to extend our circulation. Of course we do not offer the premiums as compensation for services, but simply as testimonials of our gratitude to those who shall win them by their industry and zeal in the cause of Agriculture.

What man would not dwell with an elevated and just pride in after life upon such a souvenir of his efforts in the cause of Southern Agriculture? But we promised to be brief—and we conclude by saying to the planters of the Sonth, Come up to the rescue, and sustain us, if you wish an Agricultural Journal, worthy of your patronage, and the great interest of which it is the organ. Not only subscribe for it yourselves, but urge your neighbors and acquaintances every where to do likewise. Give it, in short, a hearty, zealous, and cordial support, and the work will go on improving in every department and extending its influences into every class of society.

Planters of the South, and friends of Southern Agriculture! we commit the work to your keeping—it will be the organ of your interests and vocations. Will you not sustain it as it may deserve?

☞ We request that those who make an effort to obtain subscribers, will forward their lists as early as possible.

PROSPECTUS

OF THE THIRD VOLUME OF THE

SOUTHERN CULTIVATOR.

IN issuing the Prospectus for the Third Volume of the SOUTHERN CULTIVATOR, the Publishers have the high gratification of announcing to the public, that they have succeeded in engaging the services of

MR. JAMES CAMAK, of Athens, Ga.,

to conduct the Editorial department of the paper. The high reputation of Mr. C. as a gentleman, his acknowledged ability as a writer, his varied acquirements in science, together with the attention which he has always given to Agricultural Science and Improvement, afford the highest guarantee of the future excellence of the work.

To the friends of Agriculture, therefore, throughout the Southern States, we address ourselves, to invite their co-operation in extending our circulation, to enable us to meet the increased expenditure we now make to render our journal worthy the patronage of an intelligent Agricultural community. To you, then, friends of Agriculture, the future destiny of the "Southern Cultivator" is committed, and if you will that it shall be sustained, it will be. You must, then, *every man of you*, "put your shoulders to the wheel" and aid us in an enterprise, which contemplates the melioration of the condition and permanent prosperity of the Agriculturists of the Southern States. Each and all of you can aid us if you will. WILL YOU DO IT?

As we contemplate some slight changes in the work, it may not be improper to advise our friends. It will be published *Monthly*, on the first of each month, (instead of semi-monthly, as heretofore,) and each number will contain SIXTEEN pages of matter, just double the amount in the present form. By this arrangement, the subscriber will have his volume in 12 numbers, and thereby will be subjected to only half the postage he now pays. The first number of the third volume will be issued on the first of January, 1845.

TERMS.

ONE COPY,..... $1.00
SIX COPIES,..... 5.00
TWENTY-FIVE COPIES,..... 20.00
ONE HUNDRED COPIES,..... 75.00

The CASH SYSTEM will be rigidly enforced in all cases; and in no instance will the paper be sent, unless the CASH accompanies the order.

☞ All subscriptions must commence with the volume.

PREMIUMS OFFERED:

The Publishers, desirous of expressing their gratitude in a more tangible form than by mere acknowledgements to their numerous friends, who may make an effort to extend the circulation, offer the following premiums to those who may send them the greatest number of Subscribers to the third volume, up to the first of March next;—

I. For the largest number, not less than 100, a SILVER GOBLET, with appropriate Agricultural designs and inscription, worth..... $25 00

II. For the next largest number, not less than 80, a similar GOBLET, worth..... 20 00

III. For the next largest number not less than 65, a similar GOBLET, worth..... 15 00

IV. For the next largest number, not less than 50, "Loudon's Encyclopedia of Agriculture," worth..... 10 00

V. For the next largest number, not less than 40, "Johnson's Encyclopedia and Dictionary of Rural Affairs," worth..... 5 00

VI. For every man who sends us 30 subscribers, the two back numbers of the Southern Cultivator, handsomely bound.

All communications designed for publication, must be addressed (POST PAID) to JAMES CAMAK, Esq., Athens, Geo.; and those on business, to the Publishers at Augusta,

J. W. & W. S. JONES.

☞ Papers throughout the Southern States, friendly to the cause of Southern Agriculture, will probably advance that cause by giving this Prospectus a few insertions and calling attention thereto.

LARGE YIELD OF COTTON.—On the first of September, we received a letter from A. M. CLIETT, of Houston county, in which he stated that from one acre of land, planted and cultivated, in part, on the plan of Dr. Cloud, he had gathered in the month of August, 1028 pounds of nice seed cotton, and that the stocks were bending under the weight of the unmatured bolls. Mr. C. promised to furnish us at a subsequent time with a more detailed account of the culture, &c., and the yield. We hope he will not omit to do so, when we shall take pleasure in laying them before our readers.

RECIPE FOR MAKING SOFT SOAP.—Soft soap, of excellent quality, is made with 18 pounds of potash, 2 pounds of powdered rosin, and 20 pounds of strained grease. Put the grease into the barrel first, and sprinkle the rosin over it; dissolve the potash in hot water, let it settle, and pour off the solution upon the grease; stir well, and add water to make one barrel of soap; stir it well every day for three or four days, and set it aside for use.

SHEEP.—The Hon. J. S. Skinner, in a letter to the editor of the Prairie Farmer, makes the following remarks:

"I am of opinion that the best sheep walks will at last be found in the hilly and mountainous portions of Virginia, the Carolinas, and Georgia. I was lately in the Middlesex Mills, at Lowell, in which establishment alone they manufacture the fleeces of 1200 sheep a day throughout the year. And I was told by one of the proprietors that they got from the progeny of the Saxon sheep transplanted to Ohio, a staple longer and as fine as that of the original stock. The workers in the factory own $60,000 of the stock."

COOKING FOOD FOR SWINE.—Dr. Lee, in an article on pork making in the last N. G. Farmer, says:—"From some experiments of my own, and considerable research into the published results of the experience of others, I am satisfied that ten bushels of boiled potatoes, thoroughly mixed with the pudding that can be made from three bushels of corn or peas, will make as much pork as twenty bushels of potatoes, and six bushels of corn or peas fed raw."

CORRECTION.—In the last premium offered in our prospectus on the preceding page, we are made to award the two back *numbers* of this paper to every one who shall send us thirty subscribers. It should read the two back *volumes*.

VINEGAR.—A writer in the New Genesee Farmer, gives the following recipe for making vinegar, a barrel of which, according to this mode, will cost but a trifle. His plan is:—Take eight gallons of clear rain water, add three quarts of molasses, put into a good cask, shake well a few times, then add two or three spoonfuls of good yeast, or two yeast cakes. If in summer, place the cask in the sun, if in winter, near the chimney where it may be warm. In ten or fifteen days, add to the liquor a sheet of brown paper, torn in strips, dipped in molasses, and good vinegar will be produced. The paper will in this way form what is called the "mother," or life of vinegar.

POTATOE ONIONS.—The Brockport (N. Y.) Watchman says, that Mr. J. Greenleaf, of that place, has raised this season, 500 bushels of potatoe onions from an acre of land. Some of the largest weighed 1½ lbs. each, and were 17 inches in circumference. This kind of onion is thought by some to be valuable as an early sort—they grow wholly in the ground, like the potatoe. They are said to be mild and palatable.

CURE FOR FOUNDER.—It is said that the seeds of sun-flowers are the best remedy known for the cure of founder in horses. Immediately on discovering that your horse is foundered, mix about a pint of the whole seed in his feed, and it will give a perfect cure.

OVER-EATING APPLES.—The American Agriculturist says that a lump of salæratus of the size of a hen's egg, dissolved in warm water, is a remedy for cattle that have eaten too many apples.

HEMP AND FLAX—We observe by a late Irish paper, says the Louisville Dollar Farmer, that foreign flax is quoted in that country at £42 to £100, Irish flax at £1 15s. to £1 18s. per cwt., and milled flax at £2 12s. to £2 15s. Our object in making this quotation is to show the great advantage we possess in this country in our cheap staple hemp in the manufacture of linen. As has been seen from the extract we lately published from the report of the Russian travelling agent, hemp is used in France for the manufacture of the finest linen, the superiority of the linen being shown by the fact that it is labelled "all hemp." It is further stated that there is machinery of the most perfect kind in Europe for preparing and spinning hemp. Such machinery is also used in Ireland and England. With regard to the article of flax, certainly no country possesses advantages over this. From all these facts, it is obvious that a tempting opportunity is presented in this country for investments in the manufactory of linen both of hemp and flax. A manufacture of flax linen, we see it stated, has been established at Richmond, Va., the proprietor having been induced to transfer his skill from England to the better field in this country. There is no use of trying to invent machinery for preparing and spinning hemp and flax. The machinery is already invented, and there is nothing to do but to import it.

MR. AND MRS. CHAPMAN'S
BOARDING AND DAY SCHOOL.
No. 223 BROAD-ST. AUGUSTA.

☞ THIS Institution has been under the direction of its present principals for six years, and the success which has attended it has enabled them greatly to increase the facilities it affords for the education of young ladies. Provision is made for thorough instruction in all the departments of female education, from the elementary English studies to the higher branches of literature and science. The next term will commence Tuesday, October 1st. Pupils can enter at any time during the term, and will be charged for the time they are members of the school.

Tuition $8, $12 and $15 per quarter, according to the age and standing of the scholar. Music and French at the usual rates. Board $15 per month.

REFERENCES.—Rev. C. S. Dodd, Rev. W. T. Brantley, Rev. G F. Pierce, Dr. W. H. Turpin, Mr. J. M. Adams, Mr. D. Hand, Augusta; Gov. Crawford, Milledgeville; Dr. E. E. Jones, Madison; Col. Wm. Jones, Warren; Dr. F. George Jasper; Mr. W. B. Munro, Columbus.
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TEXAS COTTON SEED.

THE subscriber offers for sale, Cotton Seed of very superior quality. The original stock was procured in Texas, and cultivated on his plantation in Newton county, for the last three years, with extraordinary success. The yield is much larger, and the quality superior to the Petit Gulph or other kinds of Cotton usually grown in this section of country.

Planters who purchase a supply of the seed may rely upon sufficient increase in product of the first crop to refund the outlay for seed.

Planters who take an interest in improvements of this sort, are referred to the annexed certificates, and the Cotton raised from the seed may be seen at the warehouses of Adams & Hopkins and Clark & Roberts.

JOHN W. GRAVES.

A supply of the above described Cotton Seed is offered for sale at the following places, at five dollars per bushel:

ADAMS & HOPKINS's Warehouse, CLARK & ROBERTS's do., D'ANTIGNAC & EVANS's do., HAND & WILLIAMS's Store, } Augusta.
McKINLEY & MARTIN's Store, Madison.
HILL, MORROW & HILL's Store, D. DICKSON & Co.'s Store, } Social Circle

MADISON, October 29, 1844.

Dear Sir—I regret it was not in my power yesterday, when I saw you, to give you any opinion with regard to a small lot of cotton I have growing from seed presented to me last spring by my friend, John W. Graves, Esq. Since then, however, I have been to my plantation and made comparison of it with my crop of cotton, and now take pleasure in saying to you, it is a superior article in point of fineness and length of fibre, containing more lint on the seed, and will yield much more from the same quantity of land planted.

I am respectfully, dear sir,
Your obedient servant,
[Signed] WM. JOHNSTON.

Georgia, Newton County:

I hereby certify that I obtained from John W. Graves, of this county, a sack of Cotton Seed, (which he represented of superior quality introduced from Texas,) which I planted last spring, and find to exceed my most sanguine expectation. I planted it two or three weeks after my other cotton, (which is the Petit Gulph,) and notwithstanding the season was dry and unfavorable throughout the year, (the growing season) yet it is by far the best cotton I ever made. I think by the time it is all gathered, the best part will yield 2000 to 2500 pounds per acre. My neighbors who have seen it are of the same opinion. From the trial I have made, I believe it will yield double as much as my other cotton on land of the same fertility. [Signed] JACKSON HARWELL.
24th October, 1844.

Georgia, Morgan County:

This is to certify that I am neighbor to John T. McNeil, Esq., and that he last spring got a load of Texas Cotton Seed from John W. Graves, Esq., of Newton county, and planted them on what I consider average land of his farm; and from frequent observation of the crop, with his other cotton, (which is the Petit Gulph,) I do believe it will far excel any other cotton I have ever seen raised in this section of country. And I also believe that the staple excels any other I have ever examined, as to fineness and color.
[Signed] JOHN P. EVANS.

This will certify that I acted as overseer for Mr. John T. McNeil for the year 1844. My knowledge of farming induces me to believe that the Texas Cotton, raised by Mr. McNeil this year, is a very superior article, and with me preferable to any other cotton I have ever raised. It is of long and fine staple, and well bolled, and easily picked out, and has withstood a drought this year better than the Petit Gulph Cotton. It is, in a word, a valuable cotton. I have ginned eight bales of the Texas Cotton on Mr. McNeil's *Carver Gin*, and find that it yields one pound of clear cotton from three of seed cotton; and from my experience of thirty years in cotton growing, I have never raised any I think equal to the Texas Cotton.
[Signed] ALLISON KENT.

AUGUSTA, October 30, 1844.

John W. Graves, Esq.:

Dear Sir—Having been called on by you to make a statement in relation to your Texas Cotton, we take pleasure in saying, that for the last two or three years we have received at our warehouse your cotton crops. The quality has invariably proved very superior, both as to color and length of staple. On sale, it has always brought the highest market price. We consider it a very superior article in the cotton line.

Your obedient servants,
ADAMS & HOPKINS.

Mr. John T. McNeil:

Dear Sir—We have received the two bales of Texas Cotton sent by you to us, and take pleasure in saying that in color and length of staple it is superior to anything we have seen; and cheerfully recommend it as such as will always bring the highest market price.

Your obedient servants,
n5-wp&Ctf CLARK & ROBERTS.

BACON'S LARD LAMPS.—A new article, superior to all others for this purpose, emitting a good clear light without smell or smoke, and at an expense, counting Lard at 8 cents a pound, of about a quarter of a cent an hour.

These Lamps have been satisfactorily tested, and are recommended as "just the thing" for the use of planters, and all others who study utility, neatness and economy.

A supply of the above Lamps, with Fillers and Wicks for them. For sale by
HAVILAND, RISLEY & CO.
jy 24-d,c&Cultf

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SOUTHERN CULTIVATOR.

VOL. II. AUGUSTA, GA., DECEMBER 11, 1844. No. 25.

ORATION OF THE REV. GEO. F. PIERCE.

Delivered before the Alumni Society of Franklin College, at Athens, in August.

GENTLEMEN OF THE ALUMNI SOCIETY:

Although notified in due season of my appointment to address you, and accepting with good will to serve you to the utmost of my poor ability, yet I have been thrown by the stress of circumstances upon a very hasty preparation. I rely for your indulgence upon the occasion hallowed as it is by the memories of the past, and rich in the associations of the present.

It is a time for grateful joy and hearty congratulation. After the lapse of years, from widely separated sections of our country—from our various fields of labor, usefulness and profit, we meet in the brotherhood of Literature at the shrine of our earliest devotion, to renew the vows of unforgotten friendship and pledge a still fervent loyalty to our time-honored Alma Mater. Who, among us, does not feel the inspiration of the hour—the spell of memory—the gushing of a heart-warm joy, as Athens, though oft unvisited, yet ne'er forgot, rises upon his vision amplified, enlarged, adorned, but still the same in her gray hills—yon rolling stream and these Academic retreats? The thoughts—the hopes of College life, come thronging back upon the bosom with the freshness, the awakening thrill of their first conception! At friendship's altar the past and the present meet, and while yet in the flush of vigorous and aspiring manhood, chastened but not subdued; often defeated, though sometimes triumphant; looking back to the period when hope was strongest in our hearts, and ambition turned every thought in longing anticipation to the spirit-stirring scenes of opening life; the review compels us to feel, even amid the gayety and the gush of this annual convocation, that the glow, the charm, the brilliant dreams of earlier life are dimmed and gone, and that the joy of this resurrection is but an illusion of the memory—the witchery of a gladsome hour, too bright to last, and destined again to the shadow and the grave. Yes, gentlemen, the scenes of former days are gone to return no more. They may revisit us in our musing moods, or rise in mimicry of life at a time like this, and beguile us into forgetfulness for a little season, but the stern events that bestud the track of life, forbid the entertainment—dissolve the panoramic show and stir an almost agonizing consciousness of the flight of years. The sympathies of our Anniversary with emollient power may soften the rugged features of the past, and throw the enchantment of distance over the objects that belong to it; nevertheless, the contrast of early aspirations with subsequent disappointments—the changes of person, location and character—the new relations—the broken ties, must strike painfully upon the spirit; and in the graveyard hush that steals over the bosom, we can hear the foot of Time, the conqueror, as he steps through the silent gloom, enriched by the spoils of which we have been bereaved.

Assembled as we are, to commemorate the days long gone, attracted by the feelings and bound by the ties of a common experience—favored as we have been by Providence and parental kindness, debtors alike to God, our country and our kindred—responsible at every tribunal which Heaven has ordained or society erected, for the adjudication of character, it becomes us to examine ourselves, to ask and answer, what we are?—what we have done?—what we are doing for the elevation and happiness of our kind—the dignity and glory of our country? These inquiries are relevant to the time, the place and the objects of this association. The honest settlement of these questions is demanded by the responsibilities of the future, whether the investigation shall excite the glow of conscious rectitude or overwhelm us with the confusion of undeniable guilt. The shame of personal unworthiness, whether absolute or comparative, is not to be merged in the fact of general delinquency and so bereft of its condemnation; nor will the exultation of generous merit degenerate into vanity by the comparison, but the spirit of honorable rivalry kindled by the contemplation, will rush to retrieve the errors of the past, and though doomed to struggle, is yet destined to conquer. There is a moral beauty, aye, grandeur, in the principle of association—gathering kindred spirits in hallowed fellowship, taking hold upon the strength of numbers, if by the combination of our energies we seek with a noble ambition the more effectually to promote our mutual improvement, intending to consecrate all our acquisitions to the great cause of our country's weal.

Some reflections upon *Georgia—her Literary Institutions* and the *obligations* of *her educated* men may serve to combine utility with entertainment, and will not, I trust, prove an inappropriate or unacceptable offering from your humble speaker. Identified by birth, education and affection, with this my native State, her character is dear to my heart, and her true glory the object of my ambition. One of the old thirteen—canopied by a genial Heaven—irradiated by the light of a glorious Sun—consecrated by the blood of the Revolution—endowed by nature with capabilities vast and varied—circled on the East by a line of coast indented with harbors and bays, inviting to commerce, an interior of forests, hills and vales, fruitful of every good—a mountainous Western section with salubrious air, and mines of unexhausted mineral and metallic wealth, and scenery rich in the beautiful and the sublime, she stands among her sister States, with equals, few; superiors, none. Every effort to enrich and adorn has met a due reward, and the tests of experiment upon her capacities have developed a fecundity of resources wide as her territory and multiplied as her wants. A diamond of the first water, a line of purest light has followed the hand of the lapidary in every attempt to give form and symmetry to her material. In every department of labor or discovery enterprise has received a response which justified the original confidence of the operator, and rebukes the fitful spirit of the people and the selfish legislation of their representatives. While the productions of the soil, the aspects of nature, the hereditary feelings of the citizens, our domestic institutions, and the powerful influences of climate, all concur to foster and mature those developments of mind, best adapted to lofty sentiments—to refinement of taste, and to emancipation from the bondage of vulgar views; yet, is education circumscribed—its value depreciated—its benefits when conferred, prostituted, and the very taste for literature merged in angry contests about politics or in utilitarian schemes, (falsely so called) that besot the understanding and deprave the heart by ministering to the characteristic sin of the nation. We occupy before the world the singularly inconsistent position of boldly asserting equality of rights and privileges under the constitution of the country—denouncing every invasion of our rights, actual or constructive, with vehement passion, and yet tamely submitting to a most inglorious dependence for all the agencies by which taste is to be refined or sentiment cultivated. With equal mind to conceive, and more leisure to execute, we have done and are doing less to augment and diversify the national literature than the inhabitants of almost any other section of this great confederacy. The loftiness of our pretensions and the capabilities of our population considered, and contrasted with our stupid idleness—our disreputable lethargy—our degenerate ambition, we deserve the reproach of our contemporaries, and ought to feel the compunctions of an honest shame. Plied by all the stimulants that ever sprung the activity of sentient beings, yet State pride, Southern spirit, noble emulation, have all been kept in abeyance, and sloth has laid an embargo upon all our faculties and monopolized them for herself; and to disabilities, thus entailed, habit has superadded incurable callousness. Oh, when shall we awake from our oblivious sleep—cast off the wrinkled, withered skin of superannuated folly, and, arrayed in the raiment of intelligence, go forth to redeem the land by restoring her independence?

The sublime exploit of our fathers in establishing our political freedom has entailed upon us the high moral duty of perfecting and perpetuating the blessing. This is to be accomplished, not so much by adorning cities, clearing rivers, extending commerce, building railroads, (important as these may be,) as by the moral and intellectual improvement of the people. In times of peace, this is a primary obligation of government. It is the instinctive dictate of common sense and the oracular decree of enlightened wisdom. But the first want of every people is the last to be supplied by modern statesmen. Engrossed with questions of finance and commerce, of boundaries and treaties, without paltry schemes of personal promotion and party domination, they have made the theory of our government a satire upon its practice. It is a cardinal doctrine of the Republic that the enlightenment of the people is the glory and the guardian of our free institutions; and yet this broad principle, this conservative truth, is left unaided and alone to make its fortune in the world, and like the cures of a charm, works its moral wonders without a visible agency. It is a national amulet—a sainted relic of ancestral patriotism, the jewel of America and the scorn of kings, the pledge of popular dignity and the terror of ambitious demagogues. If action and opinion corresponded, all this, all these it might accomplish, not by magic and mystery, but intelligibly, according to the relations of cause and effect. Considered socially and politically, the principles of virtue and right education are the main elements—the life-giving principles of stability in the institutions of popular government, of honor among the people, and of all that gives amenity and grace to the manners and sentiments of society. But when these great interests are under the ban of legal protection, slighted, stinted, displaced in compliment to ignorant prejudices or party tactics, or turned over as matters of individual responsibility, quite beyond or below the notice of legislatures

and the patronage of the public guardians, then does this narrow-minded, selfish policy strike down the confidence of virtue, invert the laws of social order and surrender morality to the winds and waves, to sink or swim, as Heaven or chance may decree. The system of mutual dependencies which pervades society and links man to man by reciprocal obligations, while it rebukes the self-love which shuts a man within himself and insulates him from all around, yet provides for this strong instinct of our nature by the pleasurable emotions consequent upon liberal sentiments and philanthropic enterprise. They who have but one fixed principle, that of securing their own secular interests, will be ruined by their success, and are doomed to the cheerless desolation of a spirit without sensibilities and of age without friends. And when whole communities yield to the same ignoble impulses and look upon decay without sympathy, or care while their own interests are provided for, and congratulate themselves upon their pre-eminence in all that ennobles our common nature without the inclination to diffuse, then must patriotism mourn the degeneracy of her children, and religion weep the banishment of her principles. Oh! for a generous, expansive, public spirit to bear us away from our selfish centre into the sympathies and activities of a universal charity! Oh! for an enlightened, effective public opinion with trumpet-voice to rally the recreant energies of a dormant people, and muster them in proud array for the work of social regeneration and the redemption of a maltreated land.

Whatever tends to promote the wealth—elicit the enterprise, or advance the moral and intellectual condition of the State, ought to enlist the feelings and the energies of every man worthy to be called a citizen. I like not that sneering philosophy which seeks to extinguish our partialities for our own country by the claims of citizenship wide as the world; and doubt that philanthrophy which vapours about the remote, while it fails to glow with an intensity proportioned to the proximity of its objects. Everything which imparts fertility to the soil, permanency to the population, exultation to the sentiments, fame to the literature, and purity to the morals of the State, ought to levy a contribution upon the praise—the confidence—the co-operation of every man who desires the protection of the laws, or the reputation of his family. But the policy in agriculture has been to exhaust and abandon—in education to neglect and depreciate—in literature to enter into other men's labors. In the absence of positive statutes interdicting the settlement of strangers or compelling the native citizens to remove, or some other extraordinary oppression—if ingenuity had been racked to find ways and means to retard the ratio of population, more efficacious plans could not have been devised than those which have prevailed. Emigration from east to west, as new territory was acquired, and then a change of location to Alabama, or to the valley of the Mississippi, as thriftless husbandry accomplished its work of exhaustion on this side the Chattahoochee, has been the order of the day. The hazardous investment in bubble speculations—the idolatrous devotion to money-making—the prostration of every energy—the sacrifice of feeling—hope—all at the shrine of covetousness (the American Baal) has put a most degrading mockery upon all that prompts to improvement, unless it enrich the divinity of our senseless adoration. The local affections have scarcely had a name, much less a habitation. Houseless wanderers, doomed to dwell upon the wing without a heart to bid them welcome or a roof-tree to give them shelter. The homestead has been as the tent of the Ishmaelite—a lodge for a night, and the occupants wayfarers on pilgrimage to an Eldorado long sought but never found. Architecture (I degrade the word by the connection) of the rudest model has been the highest effort of the farmer, and the floral embellishments on which taste would smile, have been derided as the play-things of girlhood, and the cotton blossom the only flower in nature's garden worth a wise man's regard. The want of every thing like permanency—the shifting migratory character of the people has forestalled progress in every department, and transferred beyond our limits much of the genius, capital and enterprise, to which our loved land was richly entitled, and for the operation and success of which there was amplitude of range and constancy of demand. But with the worst system of husbandry that ever cursed the ground—a spirit of activity that eschewed taste, convenience, comfort, for the sake of treasure, sought and hoarded—preliminary to more rapid accumulation in another region—the home-bred feelings that endear the place of birth and hallow the sepulchres of the dead, resigned to the Indian tribes as unfit to trammel the genius of civilization—what could we expect but hills of flaming clay, fields of dwarfish pines thickly clustered as if to hide the poverty of their origin, and a people deaf and dead to all but the charms of a new country of deeper soil and more abundant gain? It has been too much the custom to charge everything which embarrasses our exertions or defeats our plans to the government, as if no malign influences could arise from any other source in a free country. Whatever may have been the defects of national or state legislation (and on this subject I neither affirm or deny) nothing but the most stupendous fraud of governmental policy, or oppression the most despotic, could have produced the exhaustion of soil that everywhere strikes the traveller's eye, unless there had been some radical wrong in the habits of the people. The evil under which the land groans is social, conventional—part and parcel of the domestic economy of the inhabitants. The haste to be rich, like the first transgression, has not only entailed moral deterioration, but with with baleful breath, mildewed the ground, barrenness its foot print and decay the memento of its travel.

Nothing but downright perversion or wilful abuse of talent could have produced the utter poverty of literature which marks our history. Nothing but niggard or partisan policy could have made education so tardy in its progress or so superficial in its effects. But while the cultivation of the soil, and the support of literature, as to the mode and extent, are mainly dependent upon the will of the people, irrespective of the legislation of the country, it has been the practice of all enlightened goverments to foster by munificent enactments the means and agencies of general information. I speak not now of collegiate education so much as of common school instruction. With ample means to execute, and brilliant examples in other States to guide, we have had a piebald heterogeneous system (if so dignified an appellation may be used to designate it) barren of profit and fruitful only of waste and wrong. The Poor School Fund has been the store on which the lounging *ignoramuses* who aspired to be gentlemen, without the industry to acquire the title or the knowledge to sustain the character, have been permitted to draw, by the license of careless commissioners, while the instruction given has been the mockery of legislative beneficence and a remorseless imposition upon the confiding poor. Without permanent schools, or school-houses; forced to rely upon voluntary associations for the choice of a site and the means to build; the prime movers unpaid, uninterested; the stirring of public spirit scarcely an annual visitation; without specific responsibility to the public in any of their arrangements—nothing but imbecility, mistake and prodigality could have been expected. It is matter of rejoicing, after long years of misrule and defalcation, that the last Legislature began the work of reform. Honored be the man who had the honesty to expose the iniquitous abuse of the public charity—the moral courage to propose taxation for the exigency of the case, and the wisdom to devise a plan of appropriation subject to the control of responsible men. If there is sufficient love of general knowledge to estimate the plan, or vitality enough in the patriotism of the people to apply it, his name shall stand a land-mark on the coast of time, and his monument shall be his country's blessing.

Various causes have combined to retard the progress of higher education. The *ignorant* have laughed to scorn the idea that the knowledge of the languages and of science was a necessary, or even important, qualification for the duties of a citizen in a free country. Nay, many affirm that anything beyond elementary instruction disqualifies for the more common avocations of life; and as the party policy of the country has given to the most ignorant the balance of power, the preponderating influence, they have been too formidable to be assailed in their prejudices, and any attempt at illumination was a covert insult to the dignity of the people and an aristocratic aggression upon the rights of the yeomanry. Legal equality has been made to subserve all the purposes of social merit, and mental elevation and licentious notions of liberty and independence have been allowed to suppress the noblest efforts and defeat the highest instincts of society. Instead of making the laws and regulations of the land, by enlightened legislation and well-directed social influence, the exponents and the guides of popular opinion; popular opinion—mutable, capricious, benighted—has been suffered through a vile subserviency to become a paramount power; a kind of numerical sovereignty, to whose potent, but barbarian will, all must do obeisance. No merely political interests can ever authenticate or give legitimacy to those prejudices which constitute the body-guard of ignorance, and the ready instruments of opposition to moral reform and intellectual elevation. It is the law of the moral world that intelligence shall govern, and the surrender of its heaven-invested rights can never be justified by the paltry triumphs that sometimes reward its degradation. To tremble in the presence of popular clamor, or fly from opposition, is unworthy its high character; but to go over to the enemy, is treason against liberty and order. Brute force may overwhelm it for a season, and its irregular motions and natural insubordinacy defy the authority of reason and the validity of law, but the moral courage sustained by right and a patriotic respect to the general good, that falters not in the assertion of its supremacy, will be sure to gather energy from the conflict and make defeat itself yield the fruits of victory. The cause of education needs bold advocacy in the halls of legislation, by the press and through all the means of access to the public mind. If our prominent men would array themselves upon the subject----defy the cabals of demagogueism----the perversion of sinister intrigues----though they might suffer a temporary eclipse of popularity, yet time would render praise with usury. The tyro politicians who now cater to the vulgar and the base, and like the Arabs of the desert, rush from their obscurity to repel the invasion of light and maintain their lawless rule----rebuked and foiled would retire----leaving wisdom to choose her way and patriotism to direct her journey.

The good have been deterred from patronizing institutions of learning because of the temptations to vice too often clustered about them, and of the facilities for evil that abounded among the youth collected by them. The apprehended deterioration of principle and character, whether justified by the facts or not, was sufficient to stifle the risings of parental ambition, and to doom the boy to bear the disabilities of his sire. I am inclined to think that religious fears and an assumed sense of responsibility have been credited with acts of self-denial that ought rather to have been attributed to a secular policy, cautious of expenditure and glad of an apology to save. With depreciated views of learning and an exaggerated estimate of "the main chance," it is not difficult to perceive how a mind not overwise may be duped by the plausibilities of a mode of reasoning which seems to enthrone Christianity as the presiding guardian of every family movement. If religion gained what education lost by this ill-judging timidity, then should the tongue of re-

buke be dumb and respect be substituted for censure. But when the probable corruption of morals is plead in justification of withholding the means of knowledge, and yet is jeopardied without misgiving for the sake of a lucrative employment, the evidence is clear that the love of gold has been mistaken for the love of purity. The very man who would expose his son without a sigh to the dissipations of a city for a clerkship, or associate him with some senior in depravity for installation in business, would yet dilate with pious horror upon the enticements of sinners in the place of learning; and conscience, betrayed by the sophistry of the basest passion of the human mind, sleeps gently under the conviction, that though the high capabilities of our immortal nature were left to idleness and waste, yet the substantial interests of earth were lodged amid all the securities that wisdom could forecast or prudence provide. Alas! for the sense of responsibility that can be composed to rest by such an arrangement Alas! for the parental tenderness that can be gratified in its dearest wish at so cheap a rate. The good old republican, who would not have his son to grow foppish or proud, by knowing more than his oxen, has done a father's part in teaching him to be selfish and covetous, wiser too, "than seven men who can render a reason" because he could write his name—cast his vote—add figures—knew money when he saw it, and loved it when he got it—was equal to the best in the land according to the declaration of independence and the constitution of the country. This is now the popular doctrine.

The time has been when knowledge, especially that which was exalted and refined, was the monopoly of a few—robed in the garb of mystery—immured in cloisters and dealt to the people with a sparing hand. This system was vindicated by the exclusive patrician maxims that learning diverted the people from the avocations of industry—inspired an impertinent curiosity or a dangerous ambition, and must therefore be restricted. But while these hoary errors of a barbaric age have been abandoned by the master spirits of modern times, they yet linger an incubus and a shame among the class for whose benefit the change has been wrought. But the sun which gilds with his earliest beams the mountain tops, is destined in his upward travel to lift from the valley's bosom the darkness and the mist. The revolution of popular sentiment is slow, in the absence of strongly exciting causes, and in this land of equal privileges, we have trusted too much, perhaps, to the operation of natural agencies. Reason may be free to combat error, but the battle may be fought over our graves, unless we accelerate the conflict; and victory too may linger with her ancient banner, if the friends of truth and light come not to the rescue. Oh! for some plastic power to move upon the face of the waters, that the reign of light might now begin.

(Concluded in our next.)

From the American Farmer.

CONVERSATION ON THE ECONOMY AND MANAGEMENT OF THE FARM.

"How should a farmer act to accumulate and husband the greatest amount of manure?"

"It is difficult to answer a question so vaguely put. Before any one can give anything like a solution approaching to reality, it would be necessary to know the kind of farm, quantity of wood land, of meadow, number and kind of stock, quantity of land in grass, vegetable productions and kind, number and kind of stock, and many other particulars connected with the particular system of farming pursued. It is possible, however, to throw out such general hints, as may serve as a guide, and by which we may arrive at such conclusions, as will enable any careful observing farmer, to make the most of the *materials* within his reach which are convertable into manure?"

"Now, that is what I mean by my question, and I would be obliged if you would give me your views."

"I will do so with pleasure, though before I commence, I wish you to bear in mind, that what I may advance upon the subject, is only to be considered in the light of *opinion*, upon which you are to exercise your own judgment freely. In the first place, a farmer ought to make it an important part of his system of farming, to accumulate everything on his farm susceptible of being converted into manure, and place it in a condition to be availed of without material loss. It has long been my opinion, that every man who works a farm of from two to five hundred acres, would find it to his interest to keep a team and hand constantly engaged in the collection of materials and the formation of manure heaps, as without such economy and forecast, the exhaustion of his land, which is continually going on by the growth of his crops, must impoverish his soil and render it unproductive."

"How could a farmer find employment for a hand and team thus to be occupied? What *materials* are there on a farm, saving the manure of the stock, which could be thus made into the food of plants?"

"There are a hundred sources on every farm, to give occupation in the way I have spoken of—full occupation to a hand and team. Where there is a salt marsh, that of itself would afford ample materials, for there are few richer or more fertilizing substances than marsh mud, if properly combined into composts with lime or marl—the sea-weed of the shores, if compounded with alternate layers of mould and leaves from the woods, or soil of any kind, the layers to be strewed with plaster, will make an excellent and enriching *pie*—the scrapings of the roads, barn and other yards and head-lands, are all excellent to mix with the dung and litter of horses and cattle; but in all such composts, ground plaster or pulverized charcoal should be mixed, layer and layer about, to prevent the escape of the lighter and more volatile parts of the substances while undergoing decomposition; for such parts may be said to be the most valuable—the weeds from the fence corners, lanes and every where else, should be gathered and formed into compost heaps with earth of any kind and plaster. In a word, there are no substances which are susceptible of *rotting* which will not make good manure, some richer than others, but *all good*. The *soap suds* and slops from the kitchen, all water in which the hands and face have been washed, would, if properly husbanded, convert a body of earth sufficient to fertilize two acres, into good manure, in a year. You will perceive that I have opened before you a wild field whence to draw your source of manure."

"But would the benefits justify the expense?"

"Of that there can be no question, and you should not entertain a single doubt. Say that a man could obtain 230 out of the 313 working days, 2000 loads in a year, which is allowing 8 loads per day, that would enable you to manure 100 acres, independent of your usual supply from the stable, barn-yard and pigstyes, each of which acres would, by a moderate calculation, be improved in productiveness at least 33⅓ per cent. Would it not be reasonable to say that each load of this manure would be worth 50 cents? This would be equal to $4 a day for the hire of the hand and team, so that all above the actual cost of their *hire* would be your gain. But your gain is not to be computed by any such contracted rule, as the increased value to be imparted to the soil, in its present and future condition of productiveness, should be taken into consideration, for every 20 loads of such manure would be equivalent to the fertilization of an acre of ground for any period in which it might be required for a rotation of crops, whether that period should be four or six years, provided two of the series be appropriated to grass."

"Have you named all the materials which are convertible into manure?"

"In saying that every thing, or substance, susceptible of *rotting* may be converted into manure, I speak in terms sufficiently broad to comprehend all things, whether vegetable or animal; but as you appear to desire that I should be more particular, I will name a few other articles. The *urine* of the stock of horses and cattle on a farm, where twenty head may be kept, if proper means were taken to prevent its loss, could be rendered equal to the manure of an acre per head. The stalls of the horses should always be kept well strewed with straw, or leaves, or mould and leaves, so as to absorb the liquid voidings, and to prevent the escape of the ammonia, as the decomposition of these voidings might be going on, the stable should be strewed with either plaster or charcoal, daily, and as the stables may be cleaned out, which should be done daily, the mass of manure, litter, &c., should be disposed of on the manure heap, so as to prevent loss from evaporation. This can be done by having earth thrown over each day's manure, as it may be put upon the heap. Again, a few loads of earth should be placed sufficiently near the house to receive the contents of the *chambers*, which earth should be formed into a basin-like form. Each emptying should be covered over with fresh earth, and on that, plaster, or charcoal, be strewed. The importance of this kind of care-taking and economy, may be very readily imagined when I tell you that a gallon of human urine, thus treated, would afford ammonia enough to nurture a bushel of wheat, and if the ammonia were *fixed*, as it would be by the addition of plaster, or charcoal, it would remain in the earth for years, to impart its benefits to successive crops. My own impression is, that if the *liquid* manure made on a farm were to be saved in the way I have pointed out, that it would be worth more to the farmer than all the solid manure made in his stable and barn-yard. And here let me remark, that the *sheds* or *yards* in which cattle may be kept, when brought in from the pastures, should at all times be kept covered with straw or mould and leaves, to prevent the loss of their liquid voidings, as in the case of the horses in the stables, and the same care should be taken to occasionally strew the surface with plaster, or charcoal."

"I think I have heard you say that very stiff clays might be improved by the application of sand. How would you use the sand?"

"I have expressed such an opinion, and I have done so from a practical experience of its benefits. I recollect some years back to have had in cultivation a small lot, about one half of it a piece of as cold, stiff, retentive clay as ever challenged the strength of team, or worried the patience of plowmen. It was so hard, and so retentive of water, that I had to watch the time for its breaking up with more than the power of an eagle's eye, and taking time by the forelock, I had hauled into my cow-yard a hundred loads of sand, which I spread evenly, giving to the centre of the yard a basin-like form; on the top of the sand I spread fifty loads of mould and leaves from the woods, taking care to spread it as I had done the sand, leaving the sides higher than the centre. In this yard my cows were folded and littered through the latter part of fall, winter and spring. Just before the frost sat in, I had the lot plowed up, lapping the furrows so as to expose the greatest surface to the action of the frost. As I desired to receive a crop of millet off the lot the ensuing season, preparatory to laying it down in timothy, I cut three covered drains through it, 2 feet wide and 18 inches deep, on the sides I placed poles, the ends so squared as to fit tight, over these, for want of better materials I laid crosswise, pieces of inch plank, made to fit, placed within half an inch of each other. On these I put grass sods, and then filled up and levelled the top of the drains. In the spring I scraped up and mixed the contents of my cow-yard, adding to the mass 200 bushels of coal ashes, incorporating the whole together. This as soon as the frost was out of the ground, in the spring, I spread over the lot 170 perches in extent, plowed it in as deep as a good wood plow and two horses could plow it; let it remain until the middle of May, when I harrowed, cross-plowed, harrowed again, sowed half a bushel of millet seed, harrowed it in lightly, and finished by rolling. The product on the acre

and ten perchers was 4 tons of good millet hay. In the Agust following, I plowed again to sow timothy seed, and found the soil completely changed in texture, yielding to the share of the plow as does a rich cheese to the knife of the cheeseman. The yield of timothy during the four years that I afterwards remained on the place was always good, ranging from 1½ to 2 tons per acre. From this experiment, I am satisfied that stiff clays can be more lastingly meliorated by sand than by manure, for while the one acts permanently and serves to change the texture of the soil, the other only acts partially, and makes but little if any change upon its *texture*. The sand by cross-plowing becomes intermixed with the clay, disintegrates it, so as to admit the influence of sun and air, aids the water in percolating through the soil, and prevents its remaining to become stagnant to the injury of the roots of the growing plants—and, in a word, renders the soil much easier to work, and more profitable for all the purposes of culture. In connection with this lot, I will remark, that when I put it down in timothy, I spread sixty bushels of lime on it, which was harrowed in with the seed."

"Would you recommend the littering of hog-pens?"

"I am glad you have mentioned this to me, as I should otherwise have forgotten this part of the economy of a farm. I know no part in the arrange nents of the farmer, where more or better manure may be made with as little expense. Whatever is given to the hog-pen, whether coarse tussocks, corn stalks, weeds or mould and leaves from the woods, is sure to be manipulated into excellent fertilizing manure. Ten hogs, penned the year round, if well supplied with materials, would make 60 loads of good manure in that period. The pen should be cleaned out and re-supplied with materials every few weeks. That which may be taken out, should be regularly formed into a heap, made so as to turn the water, and have plaster strewn over it, layer and layer about, which heap would be the better if covered over a few inches deep with earth of some kind, to prevent too rapid decomposition."

"Your plan of saving manure is certainly a good one, but I fear it would prove too costly to be carried into practical effect."

"You act under a delusion as to its effect. Nothing can be said to be "*too costly*" which returns a remunerating interest for the outlay of money. The object of every one who toils is, or should be, to be rewarded by a generous return for the labor bestowed and capital invested, and certainly it is the part of wisdom, to give his labors that direction which promises the most certain and richest rewards. Without a farmer takes the pains to give his lands, in *manure*, a quantity of nutriment equal to that which is annually extracted from it by the growing crops, he must soon expect to see it robbed of its fertility, his products yearly getting less and less, and he becoming poorer and poorer. Even a large farm, if not cultivated with an eye to *improvement*, will make a rich man poor, as it is not the extent of an estate, but its capacity for production which adds to his comforts and wealth. If proper care were taken to convert every thing on a farm into manure that is calculated for it, there is no farmer but might increase its fertility. Nay, a few years devoted in the way I have mentioned, would enable the owner of a poor farm to make it rich, and instead of harvesting 3 or 4 barrels of corn, or 7 or 8 bushels of wheat, he would get 8 barrels or more of corn, and 20 bushels and upwards of wheat. These results have been produced and can be again, by any one who will make up his mind and resolutely pursue the proper course to increase the fertility of his land. But he that crops every year, contents himself with taking every thing out of the land, and putting nothing into it, must expect sooner or later to find it and himself impoverished. It is as necessary to feed the land, as it is to feed the beasts with which it may be tilled, as neither can maintain their strength without food."

ORIGINAL COMMUNICATIONS.

For the Southern Cultivator.

GOOD AND BAD MANAGEMENT.

Mr. Editor:—How happens it, when two young planters set out in life with equal prospects—one having as fair a chance as the other—that we often find one of them steadily pursuing his occupation, and yearly making additions to the stock he commenced with; at the same time that we see the other, though apparently engaged steadily about his plantation concerns, gradually getting behind hand—or if that is not his case, certainly making no additions to his original property?

Some persons maintain that this difference arises from "good luck." I have heard it frequently remarked, such a one "was born with a silver spoon in his mouth," as it seemed he was lucky! Well, we all believe, more or less, in "good luck," and desire it; but an egg must be produced, before a chicken can be hatched!

Others believe in a particular destiny for each one of the human kind—taking the day of the month on which he or she was born—and referring to the book of Proverbs for the reading of that destiny: the 21st chapter for the males, and the 31st for the females.

Now, permit me to assume the position, and undertake to prove it, that the difference in the two cases, as above alluded to, in most instances, arises from good or bad management, in all the various branches connected with the vocation of a planter or farmer.

I shall draw a few simple figures, (*some of which may, perhaps, be thought insignificant,*) not merely for argument sake, but to illustrate the position I have taken. I shall present the two characters in this communication to the readers of the Cultivator, as being both men of families, and in the possession of prudent wives.

First: one will have a place for everything, and everything in its place; while on the plantation of the other, may be seen scarcely anything where it should be. A plow left in one field, a hoe in another, a broken cart or wagon lying by the way-side; and when this, that, or the other tool is wanted, there is a hand or two sent in search of it or them.

One, if he goes in debt at all, keeps a strict account of his indebtedness; keeps his wife advised of all his transactions, consults her in all important affairs, gives her the best opportunities within his power to progress with her household concerns, and assists her in all her undertakings when she is governed by prudence. She, in return, will never be found wanting in returning like favors.

The other goes in debt, and keeps no account thereof; and the larger his debts get to be, taking the greater care to hide the fact from his friends; does not tell his wife frankly of the difficulties he is getting into, nor advises with her as to the best ways and means to extricate himself; and makes contracts to large amounts without consulting his friends or wife.

While one is plowing or hoeing, overlooking his interest, the other is hunting or fishing, or lying at his ease, perhaps asleep under some pleasant shade. One attends in person to all his stock of every kind; the other sends his boy or servant to look after it. One takes, and reads, agricultural papers, and improves thereon; the other cares for none of these things, but pursues the course that will afford him the most ease. One so arranges his affairs as scarcely ever to be under the necessity of borrowing anything; while the other is always compelled to avail himself of that means of supplying himself and family with indispensables, until finally he is forced to borrow almost everything from his more thrifty neighbor. When this kind of business is carried on, in nine cases out of ten, both the borrower and lender is put to inconvenience—the lender rarely bettered.

One prepares his land well for the crop he is about to plant; plants no more than he can tend well; gets out his cotton early; gins and gets it to market early; sells for the best price he can get; and if he owes any debts, pays forthwith—frequently before they are due: while the other neglects his business; gets behind hand in the start; prepares his land badly; plants more land in a crop than he can manage with a bad start, and consequently gets "heels-overhead in the grass;" gets his cotton out late; has it to take to market when the roads are in bad order; neglects to sell; creditors become restless and begin to dun him; finally they become distrustful of him, and order suits; cost and interest are added to the principal of his debts; he frequently begs indulgence in good times until hard times come on him, when it will take two or three times as much property to pay his debts as would have been required at some previous time.

One keeps his fences in good order, is never troubled with his own or neighbors' stock getting into his fields to harrass him at a busy time: while the other neglects the repairing of his; will run the risk of trying another crop with his fences as they are, and by the time his corn is in the ear, cattle break in and cause him a great deal of perplexity and loss of time, to say nothing of the loss he may have sustained in his crop, and the loss of friendship of some good neighbor.

One will make a fair trial to accomplish this, that or the other object. If he fails, he will try again and again, and will not rest satisfied without success. The other will make a partial trial: if he succeeds, he will exult, and wonder why other men have not done thus and so; but if his first trial fails, the object is given up, and he will console himself, in the presence of his neighbor, with the remark, that he had tried hard to have these things, but by bad luck he had failed; he expected to have a fine patch of turnips, but the seed was bad, or if they came up the fowls had ate them up: and so on with other matters, without trying the second time to have the things so much desired.

I might introduce many more items to establish the position I have taken; but believing I have said enough to establish my point, I will come to a close, by further saying, that there are too many planters that are ever procrastinating as to the commencement of this, that or the other improvement, until some of them come within the bounds of an anecdote I heard some years ago, viz:—"A farmer employed a man to

cut a piece of wheat, and gave him three days to do the work. The hireling came on the day appointed, looked at the work he had agreed to do, and said he could do it very easily in two days, and he would therefore go a hunting. He came the next morning, and had another look at the work he had agreed to have done in three days, and concluded that by hard work he could accomplish his task in one day, and he would, therefore, attend to some business he had at a dram-shop. The third morning he came forward and had a careful survey of the field of wheat. His decision was, that there was not a man on earth that could cut that field of wheat in one day, and, therefore, he would not try himself!" I am, dear sir, yours, &c.,

CLOD HOPPER.

For the Southern Cultivator.

CROP OF COTTON IN SOUTH ALABAMA.

MR. EDITOR:—The past season has been favorable for our cotton and provision crops. Our prospects of an abundant production were never more flattering than they were during the last summer, until the appearance of the caterpillar in August. In many fields on the Alabama river, below Claiborne, they were very destructive; having appeared before any part of the crop had matured: and although their progress for a time was very slow, they eventually passed through entire fields, leaving scarcely any trace of vegetation. Fortunately this was not the case generally. There were instances of contiguous plantations, on some of which their ravages were thus marked, and on others very little injury was inflicted by them. Until within a few days past, the weather had been peculiarly favorable for picking. For the last five days it has rained without intermission, and there is, of course, an entire suspension of field work. The loss which must result from this change of the weather, it is apprehended, will be great on the river plantations, as there is yet a considerable portion of the crop not gathered. An inundation of the fields, which we have every reason to anticipate, will destroy all that has not already been secured: and the hopes of the planters, whose crops were not early matured, or who have delayed their picking from other causes, may be thus frustrated From the combination of various causes, the production of the crop will not exceed an average of the last four years: and with the present prices, how small will be the profit of the year's labor! There is but one alternative left to us, and that is, to cultivate less cotton, and direct our attention to the raising of stock, and to domestic manufacture, for our own supply. We must diminish the quantity of cotton for home and foreign markets, and purchase less. No other system but one approaching to a non-intercourse will rescue the Southern planter from the destruction which seems to await his future labors. He must hereafter depend more upon his own resources, and he will be more independent of the labor of others.

Claiborne, Nov. 25, 1844.

☞ "Millions for de-*fence!*" as the nigger said when a bull chased him across a ten acre plantation.

From the American Farmer.

A FARMER REWARDED BY PERSEVERANCE,

We do not recollect to have ever read an account of the good effects of persevering industry, that has given us more pleasure than the following, nor has the degree of pleasure been a little increased, by the reflection that the recipient of the reward belonged to the agricultural class:

EBEN ELSHENDER, THE MOOR FARMER.

There is something so lively and agreeable, and so thoroughly practical, in the following article, which we find in Littell's Living Age, of the 17th of last month, and which is there credited to Chambers's Journal, that we have particular pleasure in transferring it to the Cabinet. It presents to our view a beautiful illustration of the philosophy of farming. The man whose main object is the maintenance of his family, must be careful that his experiments and his enterprises shall eventually prove successful—they should, therefore, be of very limited character, compared with what those may be, of the large capitalist—our friend Eben, for instance. Where the means are abundant, we can scarcely imagine a more pleasing and rational employment than that of improving worn out or impoverished, or naturally repulsive soils. It is a delightful spectacle to observe the man of gloomy mind, roused up to successful action and public usefulness, by an object with which the healthiest and strongest might almost fear to grapple. Reference has occasionally been made in the Cabinet to the advantages of long leases. We are aware that these are less strikingly obvious in this country than in England, where there is not so strong a probability that economy and thrift will soon enable their possessor to make himself his own landlord; and in the case before us, we at once perceive that nothing could have been done without a long protracted engagement.—*Farmer's Cabinet.*

EBENEZER ALEXANDER, or, as he was usually called, Eben Elshender, a native of the north of Scotland, was originally a manufacturer, but not being successful in this line, and falling into low spirits, he went to spend some time at a village where an elder and more prosperous brother had a bleaching establishment, in the hope of recovering the tone of his mind by means of country air and exercise. The place seemed at first sight unlikely to cheer up an invalid of the mind, being situated in a high and sterile district, with northeast exposure and far from all other human haunts; but things turned out much better than might have been expected, and we shall tell how this came about.

Eben, in his wanderings in the neighborhood, was speedily attracted to a hollow in the neighboring moorlands, which might be considered as the only place within several miles, presenting the least charm for the eye—a brook, fringed by a line of willows and a strip of green, formed the simple elements of the scene, and from its situation it had a look of seclusion and warmth. He was led, by what he saw here, to surmise that elevation is not an insuperable difficulty in cultivation, provided there be shelter; and soon becoming convinced of the fact, his active mind in no long time conceived that he might employ himself worse than in endeavoring to clear a little possession for himself, at a nominal rent, out of the neighboring lands. He looked around, but, excepting the few patches in the neighborhood of the village, the region was one either unbroken heath or of moss of great depth, broken into pits, and filled with water even at midsummer. Nothing, therefore, could seem more hopeless. On the left only, as he looked northward, a large flat, lying far beneath him, and black and barren, or covered brown heath, but looking to the sun, seemed to offer the semblance of a cultivated field, and he had determined to visit it. He did so, but found it very unpromising. The surface, though apparently smooth at a distance, was rough and uneven; the soil was either stony and shallow, or a deep quick moss, wet everywhere even in summer, and with no fall by which it might be drained. A rivulet skirted it on the east, and was the natural boundary in that direction; but a swell many feet in height rose on the bank, and closed in the surface of the proposed farm from almost the possibility of being drained; and there were similar embankments on the north and west. Still it was a large surface, not materially uneven; it lay beautifully to the sun, and he could but think that, if drained, and sheltered, and cultivated, here might be an extensive, perhaps, a valuable farm. It would not require deep cuttings, as in moss flows, nor extensive levellings as in very unequal surfaces. He determined to think further.

He spoke of his purpose to no one, but he brooded over it for days, again and again visiting the ground, and last he waited on the agent of the proprietor. Even from him he exacted a promise of secrecy, if nothing should follow upon his offer; and then for a lease of thirty years, offered a shilling an acre for four hundred acres of that unbroken waste, with power to renew his lease for thirty years more, if he should so incline, at five shillings per acre; but with liberty, also, to quit at the end of five years, without being liable in damages from any cause.

Many landlords seem to fancy that though land is of no value in their hands, they have yet a right to be sharers in the profits produced by the intelligence, labor and capital of others, and that they are extremely liberal in forbearing to share for a few years in what had never existed for them, and yet will at the end of those few years, be a valuable inheritance to them and their heirs forever. The landlord in the present case was wiser. He saw that he was about to receive immediately, for a small portion of this moor in cultivation, almost as much as the entire moor brought as an inferior sheep walk, and that at the end of thirty years, it would exceed the original income of the entire possession; while this attempt at cultivation, if successful, would be an example of the utmost value, and might give his village that neighborhood which it so much required. Not only, therefore, was the offer of our friend accepted, but wood for buildings voluntarily offered, and a proper allowance for useful and well-constructed drains.

The villagers were astonished to hear that they were to obtain such a neighbor, but happy even in the hope of it. Enclosed as the place was by banks, which instead of admitting it to be drained, would, if broken, inundate it with water, it looked to them like a huge frying pan, and of course there was not abstaining from some little quiet jokes. This last was indeed the worst aspect of the affair. There was a fall for draining within the farm, but not without it; there was no final outlet. Still, our friend determined on pursuing his experiment: and as a first measure determined to give his possession a good name: he called it *Glen-Eden!*

He next marked off the site for his steading on a very slight but bare and valueless knoll, being desirous at once to sit dry and to spare his good land if there were any. As he felt that nothing would be more apt to encourage him than the comfort of his home, as soon as his turf-cottage was roofed in, he had a floor laid down in one end of it, and raising up slight ribs of wood by the walls, and continuing them overhead, had the whole neatly covered by a thin boarding, which, with the addition of a little carpet and a slight curtain, festooned over his couch—

> A couch ordained a double debt to pay,
> A couch by night, a sofa all the day—

made his end of the tenement seem a palace and enabled him to look on the storm or the sunshine with equal consciousness of snugness and security to health. Good fires soon made the other end very tolerable to his servants; and being washed with lime, though not plastered, it formed a very cheerful temporary residence. He had the rankest of the heath pulled and secured for thatch or fuel, intending to burn the rest on the ground as soon as the ground should be dry. He next laid out the fields, and ordered them to

be cleared of stones—an operation that covered them in some places to the depth of several feet; and finally he set himself to endeavor to lay the land dry.

For this last purpose, at the lowest part of the farm, but where the surrounding wall, as it may be termed, was highest,—and this was on the east,—he ordered a bank of moss to be dug out, and placed in a situation convenient for being dried and burned. In the course of this digging he came upon both stones and clay, treasures of great value in his circumstances; and lest the winter, by filling the pond with water, should render further digging impossible, he pursued his labors with great assiduity. His determination was, that this reservoir should afford him an opportunity of draining the land; and should it prove unequal to this, that a pump or pumps, to be worked by a small windmill, should raise the water to a height enabling him to send it off of his territories. In the mean time, he knew what ridicule the suspicion, even, of such a project would draw upon him, and therefore he gratified inquirers by informing them that he was forming a fish-pond for the residence, and even expected to draw profit from the ice in winter by letting it out for curling, though the game was not then known in that part of Scotland; and the parties, breathing softly, turned from him, and gently lifting up their hands and eyes, departed. Meantime he was intersecting his field, in numerous directions, by drains, leading them into one another, diverging, branching, and every way varying them according to the inequalities of the ground; and after proving their running, carefully filled them with stones taken from the surface, and all tending at last to the general reservoir. Even in winter, the land became drier and drier, and people now began to see the use of the pond. By the return of spring he had effectually drained a large space in front of his residence, and generally prepared it for the operation of the plow. And even in this, by a sort of natural instinct, he differed from the accustomed mode. Aware that oxen draw most gently and steadily, he had secured the temporary use of a strong yoke of these, to be tried in all such portions of the soil as seemed most likely to be capable of being opened up by the plow. People from the village had been engaged to attend at the same time to complete, with the spade and other implements, what the plow might leave imperfectly done, and give him, if possible, a field; and they had by this time so entered into the spirit of the thing, that the attendance was large, and in many cases gratuitous. He had no lime for the present; but he had been scavenger to the villages during the winter, and he had secured all the runnings from his own cattle in a great tank. He now set to burning, in close kilns all the turf he had been able to accumulate during the summer; and between these and the refuse of the few cattle for which he had been able to find food, he was enabled to plow and manure some twenty acres of land, which he sowed and planted with the usual crops, accompanying all the white crops with sown grass. To complete his experiment, he had procured a cask to carry out the runnings of his stables, &c., and having placed it on a cart, and fitted it with a tail-box pierced with holes, such as is used for watering streets and roads, he, as a last operation, sprinkled this liquor, so far as it would go, over the ground that had been dressed with ashes, at night, that no portion of it might be wasted by the sun; and so closed the labors of the first spring.

Science had not then discovered to us what is now known to be true, that the terms good and bad land, as generally understood, are expressions without meaning, as almost every species of land requires some culture to make it productive; and by suitable means much may be made of almost any kind of land. Neither was it then known, as it now is, what are the precise ingredients necessary to the production of the various crops, and to which the soil is a mere matrix or receiver; and that burned earth or lime, and ammonia or the runnings of stable and other usual manures, contain many of these ingredients. But by instinct or accident, by reasoning from what he had noticed, or heard, or read, and perhaps so far experimenting without much knowledge or expectation, our friend had hit upon many things now known to be useful, and the result surprised many. Not only was there no failure in the crops of Glen-Eden,—as they now began seriously to call it,—but they were rich and beautiful. The oats, standing upon moss of great depth, but drained—and that but for the draining and manure, would not have borne a green leaf—were as luxuriant as if the depth of the moss had been the cause of their excellence. The other soils, lately so thin and dead, were now deep and dry, and bearing excellent barley, with a flush of clover about its roots. Potatoes, the gift of warm and distant regions were flourishing in their little beds on this lately cold and barren moor, as if it had been their native and appropriate soil, and, in short, industry and intelligence had in a few months triumphed over the ignorance and neglect of centuries.

Till these things became apparent, however, our experimenter kept in the shade. He had dismissed all his workers, except his hind, whom he termed his "resident manager," and his wife, who was his sole servant, and a Gibeonite of a boy, for looking after his sheep. As the crops began to show themselves, the hind urged upon him the beauty of their appearance, and the almost certain success of his experiment, and consequently the duty of resuming operations. According to all appearances, his first crop would more than pay the expense that would give him a permanent and valuable possession; and as Eben inclined to this opinion, he determined to resume. As a proper preparative to this, he allowed his mother and sisters to visit him, and though they were shocked with the outward aspect of his residence, a black and careless looking turf-hut, in the midst of a comparative wild, and guarded by a pet sheep and her lambs, that, as they approached, patted the ground in a very menacing manner, yet when they entered it, and found the servant cheerfully preparing a meal in one end, while in the other was a little parlor such as any gentleman might inhabit with zest and enjoyment, they were not only surprised and pleased, but would gladly have protracted their visit, and were delighted to understand that they were speedily to join him.

Of course, from greater experience he rose to greater success. Even his laborers worked more cheerfully from seeing the success of what he had done. Moss that had hitherto seemed a nuisance, was to him a treasure, and husbanded accordingly: and stones that, above ground, were such an encumbrance, were, when planted in drains, of the utmost value. He became perfectly happy in his labor of improving, and almost regretted to think that one day it must have an end. Thirty years have passed since these operations were begun; the barren moor has been reclaimed into a valuable and productive farm, the once barren and rugged banks that impeded its draining have long been turned into boundaries covered with herbage of the softest texture, and crowned with woods at once an ornament and a shelter, and that being to be paid for, will render their owner rich. Even the deep and unsightly pool, that first assisted in laying the dry land, has been surrounded and screened by willows and alders, both useful in their way; and the numbers of ducks and geese constantly breeding on its borders and floating on its bosom, must add no inconsiderable item to the profits of the farm. Where the first damp and disheartening turf shed was erected, there are now warm and substantial offices, and fronting all, and flanked by garden walls, and bet hind them trees, stands a farm-house, in its first days a cottage, but always the seat of plain abundance, and now of every comfort and generous hospitality. Though in a climate not very genial, *it* is always warm; and from various flowering shrubs spread over it, seldom without flowers. It is the cherished residence of an industrious, ingenious, and very worthy man.

Many, stimulated by his success, soon followed his example, though on a less extensive scale; but the unpromising wild of thirty years ago, is now a sheltered, cultivated, and comparatively fertile spot, and the abode of many industrious and contented families.

A Beautiful Incident.

Messrs. Editors.—The following incident occurred a few weeks since in a village in one of the Southern counties of our state. It was a warm Sabbath afternoon, and the doors of the village church were thrown open to let in the balmy air from the fields without. The congregration had assembled and, while the minister was reading his first hymn, a beautiful dove entered the door and came walking up the main aisle.

Such a visitor drew of course universal attention. But as the choir arose to sing, he seemed startled, and lifting himself on his wings, alighted on the stove pipe above him, where he sat bending his glossy neck and turning his head so as to catch the harmony as it swelled through the Temple of God. Whether it was the chorus of voices or the full-toned notes of the organ that captivated him I cannot tell; but he sat the perfect picture of earnest attention till the music ceased.

Waiting a moment as if to hear the strain commence again, he started from his perch and sailed to the top of the organ, where he furled his pinion and sat and looked down on the audience. The young clergyman arose to pray. He is distinguished for his earnestness and fervour of his invocation, and as he stood with his hands around the Bible which lay clapsed before him, humbly beseeching the Father of all Good to send his Holy Spirit down, that beautiful bird pitched from its resting place on the organ, and sailing down on level wing the whole length of the church, perched on the Bible directly between the hands of the clergyman.

It was merely a natural occurrence, but how beautiful the picture. There stood the messenger of God with face toward heaven pleading for heaven's blessing—the Bible before him, around which his hands were reverently clasped, while on it stood that beautiful and innocent dove. The three thus together formed a group full of interest, and symbolizing all that is dear to man. The Word of God was before the people, with God's chosen emblem upon it, and God's herald clasping them both as he prayed.

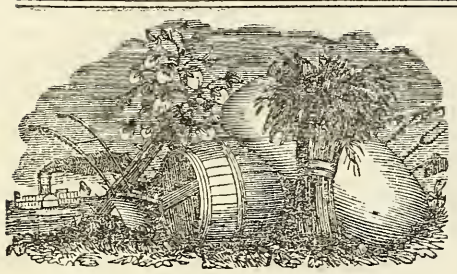
What wonder if a superstitious feeling ran through the house as the people watched the dove, the emblem of innocence and purity and the Divine Spirit itself—standing on the Bible and looking gently on them. Beautiful bird, it centered for a time the affections of all on it; and he who could have injured it there, would have injured hundreds of hearts at the same time. The pressure of its tiny feet was no sacrilege there, for the expression of its soft eye was innocence and love.

The clergyman, feeling the presence of the bird, and fearing it might distract the attention of his hearers, gently passed his hand over the Bible. The dove, unstartled, merely hopped over on the cushion, where it sat till prayer was ended. It then rose and sailed away. In former times the dove would have been regarded as a spiritual visitant from the unseen world, sent on a special mission in answer to prayer, and awakened feelings of awe and reverence.

To us it was only a natural but unusual occurrence, awaking simply the sentiment of beauty. It was a new and accidental figure introduced suddenly into a beautiful picture, giving greater harmony and perfection to what we deemed perfect before. There was no religion in it, but it was full of beauty. H.

Employment is necessary to man: if agreeable, it is a pleasure; if useful, a happiness.

Agriculture is the art of raising crops—husbandry the art of preserving and expending them.



WEDNESDAY, DECEMBER 11, 1844.

☞ We earnestly request all our friends who take an interest in obtaining subscribers for us, to send in the names of all they have obtained by the first of January.

Rev. Geo. F. Pierce's Oration.—We feel especial pleasure in inviting the attention of every reader, and particularly every father who is rearing a son, to the admirable oration pronounced by the Rev. Geo. F. Pierce, before the Alumni Society of Franklin College, at Athens, in August last, the first portion of which will be found in this number. Having, in common with a large auditory, distinguished for its intelligence and good taste, heard, with infinite pleasure, this admirable production delivered, and deeming it particularly well adapted to the correction of an evil which has become quite too common in the present day, we immediately called upon the accomplished author to obtain a copy for publication in the "Cultivator," to which he assented, in the event that the society before whom it was delivered, and by whom a resolution for its publication had been adopted, should not determine to give it a different direction. We have, therefore, the high gratification of giving it to our readers, to whom we are persuaded we could not render a more acceptable service. It would indeed be superfluous for us to add any comment upon its merits, even did our space permit, for the distinguished reputation of the author will secure for it a general perusal, and we cannot but hope that its wholesome and well digested truths will be productive of much and permanent good to the rising generation, and consequently to the future prosperity of Georgia.

☞ We are informed by Mr. Edward Wilson, of this county, says the Highland (N. C.) Messenger, that he raised, during the past summer, from one seed, twenty-one pumpkins that averaged twenty-five pounds each! Beat it who can!

☞ The N. O. Picayune of the 27th ultimo says:—Green corn, in the ear, is selling in the Mobile market. A gentleman of Stockton, Baldwin county, Ala., has raised two crops of corn this season; the second of which was in full maturity some ten or twelve days since.

Judge dairy cows more by the quantity of cream than of the milk they produce; milk is always thinner soon after calving, afterwards it gradually becomes thicker.

Guinea fowls are a preservative against hawks with poultry; and they lay more eggs than hens.

PROSPECTUS
OF THE THIRD VOLUME OF THE
SOUTHERN CULTIVATOR.

In issuing the Prospectus for the Third Volume of the Southern Cultivator, the Publishers have the high gratification of announcing to the public, that they have succeeded in engaging the services of

MR. JAMES CAMAK, of Athens, Ga.,

to conduct the Editorial department of the paper. The high reputation of Mr. C. as a gentleman, his acknowledged ability as a writer, his varied acquirements in science, together with the attention which he has always given to Agricultural Science and Improvement, afford the highest guarantee of the future excellence of the work.

To the friends of Agriculture, therefore, throughout the Southern States, we address ourselves, to invite their co-operation in extending our circulation, to enable us to meet the increased expenditure we now make to render our journal worthy the patronage of an intelligent Agricultural community. To you, then, friends of Agriculture, the future destiny of the 'Southern Cultivator" is committed, and if you will that it shall be sustained, it will be. You must, then, *every man of you*, "put your shoulders to the wheel" and aid us in an enterprise, which contemplates the melioration of the condition and permanent prosperity of the Agriculturists of the Southern States. Each and all of you can aid us if you will. Will you do it?

As we contemplate some slight changes in the work, it may not be improper to advise our friends. It will be published *Monthly*, on the first of each month, (instead of semi-monthly, as heretofore,) and each number will contain SIXTEEN pages of matter, just double the amount in the present form. By this arrangement, the subscriber will have his volume in 12 numbers, and thereby will be subjected to only half the postage he now pays. The first number of the third volume will be issued on the first of January, 1845.

TERMS.

ONE COPY,..... $1.00
SIX COPIES,..... 5.00
TWENTY-FIVE COPIES,..... 20.00
ONE HUNDRED COPIES,..... 75.00

The CASH SYSTEM will be rigidly enforced in all cases; and in no instance will the paper be sent, unless the CASH accompanies the order.

☞ All subscriptions must commence with the volume.

PREMIUMS OFFERED.

The Publishers, desirous of expressing their gratitude in a more tangible form than by mere acknowledgements to their numerous friends, who may make an effort to extend the circulation, offer the following premiums to those who may send them the greatest number of Subscribers to the third volume, up to the first of March next:—

I. For the largest number, not less than 100, a Silver Goblet, with appropriate Agricultural designs and inscription, worth..... $25 00
II. For the next largest number, not less than 80, a similar Goblet, worth..... 20 00
III. For the next largest number not less than 65, a similar Goblet, worth..... 15 00
IV. For the next largest number, not less than 50, "Loudon's Encyclopedia of Agriculture," worth..... 10 00
V. For the next largest number, not less than 40, "Johnson's Encyclopedia and Dictionary of Rural Affairs," worth..... 5 00
VI. For every man who sends us 30 subscribers, the two back volumes of the Southern Cultivator, handsomely bound.

All communications designed for publication, must be addressed (post paid) to James Camak, Esq., Athens, Geo.; and those on business, to the Publishers at Augusta,

J. W. & W. S. JONES.

☞ Papers throughout the Southern States, friendly to the cause of Southern Agriculture, will probably advance that cause by giving this Prospectus a few insertions and calling attention thereto.

MANAGEMENT OF HENS.

The Kennebeck (Me.) Agricultural Society having offered premiums for the best management of fowls, two competitors gave statements of their mode; and as they contain useful hints, we copy that of Mr. Child so far as relates to management, and that of Mr. Martin entire. To the former the first, and to the latter the second, premium was awarded.

From the Statement of James L. Child.

My hens laid nearly as well during the winter as in the warm weather. Their habitation was warm, and so constructed as to bring them to the ground, where they found at all times, a good supply of old plastering, ashes, pulverized oyster shells, charcoal, fresh water, once or twice a week beef liver, or some other kind of meat. I feed chiefly upon baked or boiled potatoes, giving their food to them warm in the morning and at night, occasionally dealing to them a little corn or oats, and giving them all crumbs, and skins, and fragments of the cooked vegetables. To prevent their being infested with lice, about once a fortnight I mixed in dough so as to discolor it, a quantity of flour of brimstone, which is a sure preventive as well as remedy, and may be safely given in small quantities to young chickens, for the same purpose.

It will be seen from my mode of keeping my hens, which average about 25 and 3 roosters, through the winter, that I cannot give the precise cost of keeping, but I am satisfied that potatoes may be given as a general food, and fowls kept cheaper in this mode than in any other—and they will always be ready for the spit, if not stinted in quantity. I find my fowls fat at all seasons.

I estimate that my hens afford me from their eggs, without regard to their meat, a clear profit of 50 per cent. I confine them to their yard, hen-house and barn cellar during gardening, and to their house and cellar in the winter, and think with that degree of confinement, they lay better than they do when allowed to wander at large. Hen-houses and roosts should be kept neat, and often whitewashed, and their nests should always have half an inch or more of ashes or lime on the bottom, under the hay. Broken or rotten eggs should never be allowed to remain in the nests. Dirty water should not be given them. To do well, they require pure water, and all their food fresh and uninjured from taint or fermentation. I estimate that during the year, (deducting the time of their moulting, and inclination to set,) I have got daily, one half as many eggs as I have had laying hens.

Every family can, with very little trouble, with their flock of a dozen hens, have fresh eggs in plenty, during the whole year, say in all, 2,000, and 100 full grown chickens; and of all the animals domesticated for the use of man, (if such be the fact,) the hen is capable of yielding the greatest profit to the owner. It is a pleasant recreation to feed and tend a bevy of laying hens.

Care should be taken to change roosters often, as otherwise the best variety in the world will run out, and cease to be profitable from breeding in: and I feel great confidence that much improvement may be made by due attention to crossing, and in this way some of the evils from breeding be averted. I have stated that I give my fowls meat: this is indispensable if they are not allowed to go at large. If corn is fed out, it should be soaked, and 15 bushels is a fair yearly allowance for 12 hens and a rooster. But they should always have food by them, and after they have become habituated to find enough at all times in the trough, they take but a few kernels at a time, except just before retiring to roost, when they will take nearly a spoonful into their crops; but if they are scantily or irregularly fed, they will greedily snatch up a whole crop full at a time, and stop laying, and not unfrequently engender some fatal disease.

Statement of JESSE MARTIN.

To the Kennebec County Agricultural Society:

GENTLEMEN:—The following is my method of keeping poultry, for which, I want your premium, if you consider me entitled to it:

My family of hens consists of twenty in number, exclusive of old king chanticleer, who rules the roost, cracks the day, and calls to operations. They are of the genuine old fashioned Kennebec breed, which live by eating, and lay for amusement; they generally pay all my *bills* by using their own. I have a room for them in one corner of my barn, warm and comfortable, well furnished with roosts, nests, &c., where all their operations are carried on, although I give them liberty to go into other parts of the barn, and occasionally the liberty of the yard, which is equal in size to that of any honest man or rogue, who has taken the benefit of the poor debtor's oath. Their bill of fare consists of a constant supply of corn in cold weather, and another dish, which they prefer, is made of boiled potatoes mashed up fine, and scalded meal or bran, in the proportion of three quarts of the former to one of the latter. In the summer the corn is shortened, and more of the hen-pudding (as we call it) is supplied. In order that the shell department of the business may be carried on to advantage, I supply them with lime and pounded bricks. I kept my account current with them, between the first of January last and the thirty-first day of July, inclusive, in which time I received two hundred and fifteen dozen of eggs: these I have sold for eleven cents per dozen, making $23 65
Estimated cost of corn and potatoes, 5 00

Balance in favor of hen family, $18 65

From this sum, take the interest of the capital invested, cost of lime, brick dust, and attendance, and you can have the profits of the brood.

☞ The Sugar crop in Louisiana is estimated at 185,000 to 200,000 hogsheads the present year.

BUCKWHEAT CAKES.—As this is the season for buckwheat cakes, the following recipe will at this time be valuable to those who are fond of them; a friend, who has tried the experiment, says it makes decidedly better cakes with half the trouble necessary in the usual mode of raising them with yeast.

To three pints of buckwheat flour, mixed into a batter, add one tea spoonful of carbonate of soda dissolved in water; and one do. of tartaric acid dissolved in like manner; first apply the carbonate, stir the batter well, and then put in the acid; thus the use of yeast is entirely superseded, and cakes "as light as a feather" are insured. One great advantage is that the batter is ready for baking as soon as it is made.

The foregoing is a very excellent *recipe* for "spoiling a batch of batter," or turning out "cakes," upon which chippings from a respectable leather apron would be quite an improvement! The man who started the *recipe* must have had strange notions about the "lightness of a feather." Cakes, such as he recommends, would give an ostrich the nightmare!

CONTENTS OF THIS NUMBER.

Communications.

Oration, delivered before the Alumni Society of Franklin College, by the Rev. Geo. F. Pierce,... 193—195
Good and Bad Management,... 196—197
Crop of Cotton in South Alabama,... 197

Selections, Extracts, &c.

Conversation on the Economy and Management of the Farm,... 195—196
A Farmer Rewarded by Perseverance,... 197—198
A Beautiful incident,... 199
EDITORIALS, etc.,... 199
Management of Hens,... 199—200

PRINCE'S
Linnæan Botanic Garden and Nurseries,
FLUSHING, L. I., NEAR NEW YORK.

THE New Descriptive Catalogues (which have cost over $700) of the TREES, PLANTS, and SEEDS at this Establishment, will be sent gratis to every *post paid* applicant by addressing

WILLIAM R. PRINCE & CO.
Flushing, Dec. 4, 1844.

TEXAS COTTON SEED.

THE subscriber offers for sale, Cotton Seed of very superior quality. The original stock was procured in Texas, and cultivated on his plantation in Newton county, for the last three years, with extraordinary success. The yield is much larger, and the quality superior to the Petit Gulph or other kinds of Cotton usually grown in this section of country.

Planters who purchase a supply of the seed may rely upon sufficient increase in product of the first crop to refund the outlay for seed.

Planters who take an interest in improvements of this sort, are referred to the annexed certificates, and the Cotton raised from the seed may be seen at the warehouses of Adams & Hopkins and Clark & Roberts.

JOHN W. GRAVES.

A supply of the above described Cotton Seed is offered for sale at the following places, at five dollars per bushel:

ADAMS & HOPKINS's Warehouse, CLARK & ROBERTS's do., D'ANTIGNAC & EVANS's do., HAND & WILLIAMS's Store, } Augusta.
McKINLEY & MARTIN's Store, Madison.
HILL, MORROW & HILL's Store, D. DICKSON & Co.'s Store, } Social Circle

MADISON, October 29, 1844.

Dear Sir—I regret it was not in my power yesterday, when I saw you, to give you any opinion with regard to a small lot of cotton I have growing from seed presented to me last spring by my friend, John W. Graves, Esq. Since then, however, I have been to my plantation and made comparison of it with my crop of cotton, and now take pleasure in saying to you, it is a superior article in point of fineness and length of fibre, containing more lint on the seed, and will yield much more from the same quantity of land planted.

I am respectfully, dear sir,
Your obedient servant,
[Signed] WM. JOHNSTON.

Georgia, Newton County:

I hereby certify that I obtained from John W. Graves, of this county, a sack of Cotton Seed, (which he represented of superior quality introduced from Texas,) which I planted last spring, and find to exceed my most sanguine expectation. I planted it two or three weeks after my other cotton, (which is the Petit Gulph,) and notwithstanding the season was dry and unfavorable throughout the year, (the growing season) yet it is by far the best cotton I ever made. I think by the time it is all gathered, the best part will yield 2000 to 2500 pounds per acre. My neighbors who have seen it are of the same opinion. From the trial I have made, I believe it will yield double as much as my other cotton on land of the same fertility. [Signed] JACKSON HARWELL.
24th October, 1844.

Georgia, Morgan County:

This is to certify that I am neighbor to John T McNeil, Esq., and that he last spring got a load of Texas Cotton Seed from John W. Graves, Esq., of Newton county, and planted them on what I consider average land of his farm; and from frequent observation of the crop, with his other cotton, (which is the Petit Gulph,) I do believe it will far excel any other cotton I have ever seen raised in this section of country. And I also believe that the staple excels any other I have ever examined, as to fineness and color.

[Signed] JOHN P. EVANS.

This will certify that I acted as overseer for Mr. John T. McNeil for the year 1844. My knowledge of farming induces me to believe that the Texas Cotton, raised by Mr. McNeil this year, is a very superior article, and with me preferable to any other cotton I have ever raised. It is of long and fine staple, and well bolled, and easily picked out, and has withstood a drought this year better than the Petit Gulph Cotton. It is, in a word, a valuable cotton. I have ginned eight bales of the Texas Cotton on Mr. McNeil's *Carver Gin*, and find that it yields one pound of clear cotton from three of seed cotton; and from my experience of thirty years in cotton growing, I have never raised any I think equal to the Texas Cotton.

[Signed] ALLISON KENT.

AUGUSTA, October 30, 1844.

John W. Graves, Esq.:

Dear Sir—Having been called on by you to make a statement in relation to your Texas Cotton, we take pleasure in saying, that for the last two or three years we have received at our warehouse your cotton crops. The quality has invariably proved very superior, both as to color and length of staple. On sale, it has always brought the highest market price. We consider it a very superior article in the cotton line.

Your obedient servants,
ADAMS & HOPKINS.

Mr. John T. McNeil:

Dear Sir—We have received the two bales of Texas Cotton sent by you to us, and take pleasure in saying that in color and length of staple it is superior to anything we have seen; and cheerfully recommend it as such as will always bring the highest market price.

Your obedient servants,
n5-wp&Ctf CLARK & ROBERTS.

BACON'S LARD LAMPS.—A new article, superior to all others for this purpose, emitting a good clear light without smell or smoke, and at an expense, counting Lard at 8 cents a pound, of about a quarter of a cent an hour.

These Lamps have been satisfactorily tested, and are recommended as "just the thing" for the use of planters. and all others who study utility, neatness and economy.

A supply of the above Lamps, with Fillers and Wicks for them. For sale by
HAVILAND, RISLEY & CO.
jy 24-d,c&Cultf

SOUTHERN CULTIVATOR.

VOL. II. AUGUSTA, GA., DECEMBER 25, 1844. No. 26.

ORATION OF THE REV. GEO. F. PIERCE.

Delivered before the Alumni Society of Franklin College, at Athens, in August.

(Concluded.)

Another circumstance of disastrous results in the past and of evil omen for the future, is the fact that anything but a learned profession (a wretched misnomer by the way) has been considered quite beneath the dignity of a college-bred man. I mean no disrespect to lawyers or doctors, when I say that the supply largely exceeds the demand; and the want of employment among the incumbents of these departments of society has gone far towards reducing the honor of manual labor, and of giving respectability to idleness. The capital of a country is but accumulated labor, and he who adds nothing to the stock, by the toil of his head or his hands—whatever may have been his educational privileges, or whatever may be his nominal fellowship with the diligent, the honorable and the useful—is yet the abettor (involuntarily perhaps) of impoverishment and vice.

There is but little difference, however, between a life of inactivity by preference, and the choice of a profession which dooms one, by obvious and invincible causes, to lie hand-locked and idle for years, and often for life. In the absence of stern discipline and of high self-sustaining integrity, the moral dangers that ambush this theatre of action are fearful, and sometimes take captive those best furnished for the war. The arrest of ambition—the forestalling of hope—the stagnation of enterprise, engender discontent and despondency, and drive their despairing victim into the apathy of a heart, from which the spirit of honorable independence has fled, or hurry him out of the insufferable calm into the rapids of dissipation, on whose dark waters he is destined to roll a hapless and dismantled wreck. Oh! how many ethereal spirits, appointed of heaven to enlighten and bless the world, have been quenched in the noxious vapors, exhaled from the bogs and fens of public life, or fanned into fury, have become firebrands to set society in a blaze. O! how many a grey head has gone down with sorrow to the grave, mourning the extinction of life's last and fondest hope in the inebriate folly of a reckless son. Many a staid observer of society has preferred to retain his boy in the sheltered lowliness of life's humblest walks, rather than adventure him upon the high places, where the rushing storm sweeps anon and the heaving surge dashes upon the base, nor yet in vain. The professions, I know, ought to be filled; but they need not be gorged. These necessary appendages to every well-ordered and well-provided community, ought not to be converted into enclosures to rear "lilies that neither toil or spin," or made to bear the odium of having admitted to honorary membership a set of men who, born to dig, are yet not ashamed to spunge. I have no respect for an idle man—the country has none—and the curse of education and of colleges has been that by the inconsistent policy of the people they have been made the apparent patrons of an order of things hostile to the primary virtues of personal independence and self-sustaining labor. But this cup of mischief is nearly full. The law of necessity is beginning to be felt. Thanks to our slandered climate—our crystal waters—the temperance reformation and the blessed Providence ruling over all, the crowd of M. D.'s who scatter themselves over the land, have time to review their studies and enjoy their title by virtue of their diploma, rather than by the abundance of their gains. The law, with its locust swarm, yields but little—except to the veterans of the bar—dooms the young candidates for fees and honors to the fate of a coroner, who derives his living from the accidents of field and flood; or of an heir patiently abiding the death of his kinsman.

This state of things surely cannot be protracted. Nor would it, if a vitiated public opinion did not depreciate other avocations, and make the professions the only stepping-stones to character, promotion and influence.

Why has the ancient and honorable occupation of agriculture been brought down from the high position assigned it in the allotments of Providence and the true interests of nations, to rank with those employments that lie level with the grossest natures and the darkest minds? Why is it that the cultivators of the earth are never recognised, in their true character, as the best citizens in times of peace, and the bravest defenders in the day of war, except when their numbers are reckoned for political purposes? The policy of bringing the moneyed interest in opposition to the landed, or of crowding out the sovereigns of the soil, by the concentration of all political influence in the hands of the professional, is mischievous to the last degree upon the character of the people and the stability of legislation. Whether by statute or by conventional arrangement it is immaterial, the effect is to create a sort of informal corporation—a class of men who merge the love of country in the love of gold and of self, and who would sustain liberty or promote disorganization, as the calculations of personal interest might show that either would enure to their aggrandizement. The distinctions and offices of the State, under this system, become, to a large extent, the hereditary property of professed politicians and political adventurers, who, having no interest in the country, daringly sport with its vital concerns, and mock the people with fair words, while they abuse their franchises. With no rule of action but the retention of popularity, and no scruples about the character of the means, when they promise success, the world of politics becomes one vast laboratory, and the credulity of the people the crucible in which these political alchemists work out their endless experiments. On the principle that thunder purifies the atmosphere and tempests leave salubrity behind them, these little human Jupiters are for ever thundering. Panic after panic comes on—the cloven foot of oppression peeps from every enactment for which these men, or their party, cannot claim paternity; and, like the witch in the fable, who raised an earthquake to find her lap-dog, they are for ever shaking the heaven and earth of politics to get a name or keep an office. No marvel that the young and ambitious, seduced by this strategy, enter the list of competition, ready for every expedient of demagogueism, and perpetually strengthen the party we condemn.

The agricultural interest is the only one that, in all conjunctions, is identical with the peace, wealth, and true glory of the State and Nation. The investment of capital, labor, time, in the cultivation of the soil, makes patriotism synonymous with interest; and the happy moral influence it exerts upon those engaged in it, rears up a class who combine the domestic charities with the sterner civic virtues of frugality and valor, industry and independence. And whenever there is force enough in public opinion, or wisdom enough in State policy, or influential example, to give pre-eminence to this employment—to multiply the possessors of the soil—to elevate them in knowledge and social character and political importance, Georgia will have developed a secret of wealth and power more fruitful than her mines, and less fickle than the price of her great staple. As the Englishman, wherever he wanders, wherever he toils, turns his eyes and his hopes to Albion's white cliffs, nor rests till, his fortune made, he returns to the parent land to enrich it with his treasures—so here local affections would spring into bloom and fragrance and fruitfulness. Population would multiply—stability its law; improvement its pride. Science would enrich the soil, and taste embellish the habitations of the people. Our barren hills would smile with plenty, and our country seats would be the retreats of virtue and the home of the graces. The spirit of rivalry, without its bitterness, would pass over the land to vivify the dormant energies of the citizens, and the face of the earth would blossom as if a primeval spring were about to usher in another Eden. The social hearth, the festive board, the field, the wayside, would be the theatres where genius would dispense its treasures and intelligence diffuse its light—general education would rise in value and grow catholic in its blessings—literature would return from her exile radiant with glory, and life itself put on charms for ever new.

The history of education throughout the civilized world will sustain the observation, that the most efficient mode of promoting common-school instruction, is to foster, by a liberal provision, the higher institutions of learning. There must be a parent tree, shooting its vigorous roots far and wide, and casting its seed upon the pilgrim winds, if you would stock the land with kindred scions. Common-schools constitute one of the varieties of educational appliances, demanded by the diversified condition of a numerous population; but the sphere in which they operate, can never reach the motives and energies that must be stirred to produce a college. Any effort to supply the last with pupils, and means, by an exclusive enactment, in behalf of the former, is an effort to invert the laws of society, and the natural relation of things, as futile and absurd as would be an attempt to irradiate the heavens by a congregation of glow-worms when the sun was in an eclipse. Light descends; it is nature's law. If you would bespangle the sky with stars, lead forth the moon in brightness and bathe the earth in splendor, kindle the sun. The people, the churches of Georgia, tantalized for years by the legal guardians of this great interest, have taken into their own hands the work of popular instruction. Under their auspices, by voluntary contributions, colleges have sprung into existence; and within their walls, hundreds will be trained to knowledge and usefulness, who else would have groped in the gloom of obscurity, to fortune and to fame unknown. These institutions did not originate in the spirit of illiberal rivalship, or from the impulse of enmity to this ancient and honorable "mother of us all."*

*Franklin College.

She, venerable for her age and honored for her instructions, dwells in the affections of her sons unrivalled and alone. The Priestess of learning, the minster of knowledge, let the people rise up and do her reverence. *They*, allies and auxilaries in the same general cause, aspire to fellowship in usefulness and community in honor. Franklin, Mercer, Oglethorpe, and Emory, a brilliant constellation—Georgia's diadem, more precious far than the jewelled crown

"That rounds the mortal temples of a king."

Nor must I forget "that bright particular star" that beams from Macon's hill—a literary Venus, whose morning and evening light, sheds the hope of brilliant prophecy on the future destiny of Georgia's beauteous daughters.

The annual contributions of the first named colleges, to the intelligence and public character of the State, entitle them to the confidence and the patronage of the citizens. The advantages are numerous and diversified. The mere accession to the numbers of our educated men, is no insignificant consideration; but when we remember that the large majority of the graduates are dependent upon their personal exertions for support, and the fact that the professions of law and medicine cannot sustain them all, a necessity arises full of promise to the future advancement of the State. Education is neither bread nor raiment—employment must be had. The desire of independence—the pressure of want—the condition of character, all enforce the obligation of industry. In the distribution of the talents and knowledge of the State, every department will come in for a share; discrimination will resume its office, and the professions which have grown cumbrous and unprofitable, by an ill-judged monopoly, will be left to the wise and healthful operation of incidental protection. The school-house—the theatre of useful employment, honorable toil and ample remuneration—so long repudiated by Southern scholars, will be filled from among ourselves, and our disreputable dependence come to an end. I mean no insinuation against the men who have served us; they are honorable men and deserve the gratitude of the country. But it is a maxim of political economy, that no State can be be permanently prosperous and happy, unless she cherish and develope the elements of internal independence. A system of agriculture, which imposes the tax of buying all we consume, not less surely impoverishes the land and the people, than will the importation of teachers circumscribe the benefits of education and obscure the honor of this noble occupation. Let our graduates enter our village academies, locate themselves in country neighborhoods, and bring the advantages of knowledge home to the eyes and the hearts of the people. They will perceive them to be an ornament of character, a source of profit, a qualification for usefulness; and estimating their value by these utilitarian standards, will feel and appreciate their worth. The spirit of emulation will be kindled, patrons of learning multiply, our college classes swell to their appropriate size, and these intellectual fire-balls that have been accustomed to perform their splendid tours along the political heavens far beyond the range of popular vision will stoop to enlighten the land that gave them birth.

Science will lift agriculture from the level of mere drudgery to the elevation that belongs to it; taste remodel the uncomely arrangements that now blur and blot the face of the earth, and trees, and arbors, and gardens beautify the habitations of our people; and amid rural scenes and the innocent occupations of country life, many a now idle hand will have work to do, and many a weary heart find a home, its passions at rest and its virtues in bloom.

These denominational institutions are not the nurseries of prejudice and bigotry, exclusive sectarian inclosures where churches plan for power and the priesthood scheme for dominion, but the offspring of a patriotic religion; they seek to expand thought in the light of the Bible, and baptize character in the spirit of christianity. They were never intended to supersede the State University in the affections of the people, to abridge its usefulness or to reflect upon its character. Nor have they operated to its injury. Different vessels under the same flag, they constitute but one navy, a home squadron, the credentials of Georgia's spirit and the bulwark of Georgia's strength. Every mind reclaimed from ignorance, every error corrected, every moral enemy forestalled, is wealth and peace and glory won for Georgia.

If the history of this institution did not warn me that to hope was to be mocked, I would express the wish that the State might, by liberal donations, contribute to endow them all. To discriminate would be invidious and unjust. And certain I am, no man, no church desires it. But as instruments of general usefulness, they deserve to be cherished. Patriotism demands it and sound policy would approve the deed. But alas! for the country, it might not be popular with the people, and the time-serving politicians of these degenerate days love them too well to offend their prejudices. Hope dies within me when I remember that the appropriation for Franklin College has been the subject of an annual contest in the halls of legislation, and that the champions of ignorance, the knights of economy, have at last despoiled her. Ignoble achievement!—a stigma upon the legislation---a blot upon the history of the State. Our Alma Mater has been slandered to justify her spoliation, and the ruthless enemies of light and truth who have been the instruments of her injury, insult the understanding of the people in the expectation of their approval. And if the mass are ignorant of their true interests, duped by prejudice and delusion, that man is neither philanthropist or patriot or statesman, who becomes the organ of their senseless mouthings and the executor of their vandal will. Let oblivion be his tomb; nor monument nor epitaph transmit his name to another generation. Georgia needs men, high minded men, who will dare to brave the misapprehension and censure of the multitude; who will move in advance of popular opinion, and stand by right, unappalled by the opposition of party, undaunted by the desertion of the time-serving; men who, fearless of misconstruction, shall abide in indomitable virtue, strong, the watchlights of the land, to whose steady lustre desponding patriotism may turn with hope her languid eye, and from whose inspiring beam she may relume the glow of a quenchless courage. Would that I could heave from the depth of society a giant wave of indignation, whose onward roll should bear down prejudice and error, and toss upon its scornful crest the parasites that hang about the skirts of power, and beat with resistless fury upon the last stronghold of darkness and crime.

I long to see the day, when devotion to party shall be lost in the love of country, and our colleges, enshrined in the confidence and affection of a generous population, shall be the instruments of a refined and harmonizing culture to all the people. I long to see the day, when a taste for the beautiful in nature and art shall moderate the passion for vulgar excitement and sensual indulgence, when the employments that embellish life and relieve its monotony shall kindle in every bosom the love of home, and blend the intercourse of old and young in one beautiful picture of duty and delight. I long to see the day, when our gallant State shall walk abroad in the freedom of all her faculties, travelling into the regions of philosophy and literature to gather the wealth of ages gone, when her colleges shall rank with the proudest in the land, and the poorest citizen shall know how to read and to write, and when the star that now sheds a dubious light on Georgia's fortunes shall swell into a broad and blazing sun, and stream in glory unexhausted and inexhaustible.

On you, gentlemen, and your co-partners in privilege and position, devolves the duty of promoting this high civilization. Whatever the gifts of nature, Providence, or grace—employ, appropriate them all. Cultivate a public spirit. If, seduced by the blandishments of pleasure, you have lived in inglorious idleness; or, dispirited by the listlessness of the people, have resigned the hope of change—repent, reform, rouse, rally; and the achievement of the future shall redeem the shame of the past. Enterprise can triumph over difficulty; virtue will reap its reward. Education may, must vindicate its claims to patronage and diffusion by the refinement, the character, the usefulness of its recipients and represen tatives. Let your light shine; aspire to be the benefactors of your country. Born and bred upon her soil, defended by her laws, enlightened by her institutions, let Georgia reap the reward of her bounty in the consecration of your talents to her service. Promote knowledge, foster improvement, advocate sound morals by precept and example. The lofty gratification of doing good will cheer your labors and the honors of a generous population crown your days. The future history of the State will be the fulfilment of our proudest expectations, and peace and plenty bless this land of our hearts, our hopes and our homes.

BOTANY.

On the obligation of every Young Farmer to become acquainted with the history and character of the plants that come every day under his observation.

Extract from an Address de ivered before the Agricultural Society of Newcastle, Delaware, September, 1843. By JOHN S. SKINNER, Esq.

While I would thus urge upon agriculturists, and especially upon the young class, the importance of a correcter knowledge of *all* that belongs to the profession, I shall limit what I have to say to a few cursory remarks on the propriety of being accurately acquainted with the history and character of those *Plants*, whether valuable or pernicious, which come under the daily notice of the farmer. Without derogating in the slightest degree from the importance of the other departments of Natural History, it may be safely affirmed that the *vegetable creation* presents an eminent claim to the consideration of the cultivators of the soil. It is emphatically with the *products of vegetation*—the great source of animal subsistence—that the agriculturist is concerned; and if in other pursuits the operative finds it necessary to be well acquainted with his materials, it cannot be less desirable that the farmer should have an accurate knowledge of those objects which demand his care and attention. With such knowledge, he can not only understand precisely what plants are most worthy of culture, but, what is scarcely less important, he can comprehend the true character of those which require all his vigilance to exclude or to extirpate from his grounds. He can not only identify, to his own satisfaction, the plants which it behooves him to know, but, by the use of an appropriate nomenclature, he can make himself perfectly intelligible when communicating his information to others. The want of this knowledge, and especially the uncertainty of popular names, is a source of much confusion and perplexity in the intercourse of farmers, and in the essays of agricultural writers.* Every district of country, and almost every neighborhood, has its own names for well-known plants; but they are apt to be variously applied, the same plant being frequently known by different names, and the same name often bestowed on very distinct plants. A striking instance of this may be cited, by way of illustration, in the use of the term *Herd's grass*, which, in *New England*, is applied to the grass known to us by the name of *Timothy*, or the *Phleum pratense* of the botanists; whereas, in *Pennsylvania*, and perhaps in all the States

*We almost every day see high wrought notices of plants, supposed by the writers to be new or unknown, and which set the curious all agog to learn what the wonderful novelties may be, when nine times out of ten, if the proper scientific names were given, we should recognise them as old acquaintances, and should always be able to form a tolerable estimate of their value, by a knowledge of their botanical character and affinities. In all such cases, there is no surer protection against imposition, or what is vulgarly called *humbug*, than a competent acquaintance with the first principles of Natural History, which should be taught, and considered as an indispensable branch of education, in every school throughout the land.

south of it, the term *Herd's grass* is appropriated to a plant technically called *Agrostis vulgaris*, entirely distinct from the preceding and of inferior value. This discrepancy is liable to cause annoying mistakes, and has even been the occasion of litigation between the seedsmen of Boston and Philadelphia. I can perceive no remedy for the errors and confusion resulting from a loose and variable popular nomenclature but a resort to the precise scientific names imposed by systematic writers. The use of popular names may answer every purpose in colloquial intercourse with our neighbors; but when we wish to be explicitly understood by strangers, or by persons in trade, it would be better to employ the exact language of science, and to use those *names* for objects which have a specific meaning, recognised by all the world. Nor need this be regarded as an onerous task, so far as the practical farmer is concerned. To attempt to master the nomenclature of the whole vegetable kingdom would indeed be a hopeless and futile undertaking, but to be able to designate by the appropriate names all those plants which he finds deserving on his grounds is an accomplishment which every *young* farmer, at least, should resolve to acquire. In the middle States there are to be met with on our farms perhaps *one hundred species* of plants which claim attention, either for their valuable or pernicious qualities, or which ought to be expelled as worthless occupants to the soil. These ought to be well known to every farmer; and surely no intelligent man can doubt his ability to learn the names and characters of that number, when he recollects the facility with which all the world acquired the scientific name of a plant of recent notoriety. The classical name of *Morus Multicaulis* has become as familiar as a household word in the mouths of the most illiterate rustics in the land; and it would be a libel on the intellect of American farmers to insinuate that they could not become equally well acquainted with those other plants which are daily before their eyes, either claiming their care or requiring extirpation.

In truth, the well-bred agriculturist, whose business it eminently is to study and turn to good account the products of the soil, ought to know the name, the character, and the entire history of *every plant* that he meets with on his premises, or approaches him from those of his neighbors: but all I ask as a commencement is, that he should learn to know the limited number which it is his immediate interest to know, and of which it is disreputable as well as disadvantageous to be ignorant. Many worthy persons, I am aware, allege as an excuse for their deficiency in this kind of knowledge that they *have not time* to acquire it; but I beg leave to intimate to such, that they have mistaken the nature of their complaint. It is not so much the *want of time* which afflicts them, as the *want of taste* and the *neglect of opportunities*. We all idle away countless hours of our existence, and especially in the morning of life, which might be successfully devoted to the attainment of useful knowledge. *Taste* is a faculty which can be cultivated; and *opportunities* to be improved happen to all men. It is impossible for an intelligent observer to ramble amid the works of creation without acquiring some knowledge of their character; and if he cultivates the habit, he will insensibly accumulate an amount of information, which, to the careless, seems to be the result of long and laborious research. Some of the most successful students of nature I have ever known prosecuted their inquiries under a constant pressure of the every-day cares and duties of life, and yet were remarkable for the exemplary performance of those duties. It will not avail, therefore, in this age and nation, to plead a *want of time* as an excuse for neglecting those attainments which are due alike to the best interests and to the high character of our profession. But if the practical farmer shall still insist that it is incompatible with his turn of mind and habitual employments to indulge in this kind of research, there is a simple and ready method by which he may obtain a sufficient knowledge of all the plants which present themselves to his notice, and seem to require his attention. Let him collect a fair specimen of every such plant, both in flower and fruit; let the specimen be carefully pressed and dried so as to exhibit the characters; and let each species be preserved in a distinct sheet of papaper, accompanied with a label, designating *the place of growth*, *the date of collection*, and *the common name or names* by which it may be known, together with any remarks that may tend to illustrate its history or properties. The specimens, thus prepared, will then require nothing more than the *scientific names* to determine their identity when spoken of, and to render them intelligible to all the world. Those names can be readily obtained from botanical friends, who always take pleasure in affording such information; and thus, with a very trifling labor, (I should rather call it an instructive amusement,) and in the compass of a convenient volume, the farmer may have always at hand the means of knowing by name, by sight and by character all the plants of his vicinage in which he has the slightest interest. When memory fails, or doubts arise concerning the identity of any particular species, he can turn to the standard specimens in his little *Herbarium*, as the scholar does to his dictionary, in the full confidence of obtaining a solution of his difficulties. His knowledge will be of that authentic kind which results from ocular demonstration; and by employing terms which convey definite ideas, he can communicate what he knows with clearness and precision.

Upon this simple and feasible plan may be obtained a fund of accurate information, which would serve as a basis, or starting point, for more extended and important attainments. The intercourse between agriculturists would become more interesting and profitable, because they would better understand each other. In discussing the merits or demerits of any given plant, they would know exactly what they were talking about; and not waste their arguments, as they sometimes do, under an utter misconception of the object in dispute. A *Kentuckian* and a *Pennsylvanian*, for example, are liable to exchange opinions concerning the value of "*Blue Grass*," in their pastures, without being aware that they have reference to entirely distinct species. Similar mistakes often occur in relation to noxious weeds. I have seen an excellent farmer waging war with the common *wild chamomile*, (*Anthemis Cotula, L.*) in the belief that he was contending with the *Ox-eye Daisy*, (*Chrysanthemum Lucanthemum, L*) a vile nuisance, which has been permitted, partly by ignorance, but more by a culpable negligence, to overrun a large portion of our country: and in one of our gazettes, a few years since, a series of vigorous essays appeared, calling the attention of farmers to the *wild Teasel*, (*Dipsacus sylvestris, L.*) a comparatively harmless biennial, and denouncing it under the full persuasion of its being that formidable pest, the *Canada Thistle*, (*Circuim arvense*, Scop:) while the real Canada Thistle was extending itself, in the immediate vicinity of the essayist, unnoticed and unknown!

Such errors are not only prejudicial to the farming interest, but absolutely disreputable to the profession: and I have so much of the *esprit de corps* about me, that I am ambitious to see a correct knowledge of those objects which immediately concern me diffused throughout the whole agricultural community. I certainly believe it to be entirely practicable, in the mode I have indicated, otherwise I should not have ventured to trespass upon your time and patience in urging its attainment.

I have insisted upon the necessity of studying the character of *weeds*, as well as of useful plants, because it will be found that the pernicious and worthless species amount to more than *three-fourths* of all those which occur on our farms, in this latitude: and, I may add, that *nine-tenths* of the most pestilent intruders have been introduced from abroad. Hence it is indispensable to neat farming to possess a knowledge of all that ought to be excluded from our premises, as well as of those deserving culture. We should not only have this knowledge, but it must be accompanied by unceasing vigilance. The utmost care should be observed in the selection of seeds; and whenever a plant of strange or suspicious character makes its appearance it should be promptly attended to. Many weeds are disseminated in a single season, so as to cause much labor and trouble in getting rid of them; and a few years of slovenly neglect will often render their thorough extirpation an almost hopeless task. There should be a cordial co-operation among the whole fraternity in resisting noxious invaders; for the carelessness of one individual may be a source of grievous annoyance to a whole neighborhood. The sloven should be shamed out of his negligence, and the ignorant induced to seek knowledge by the successful *example* of his brethren; for example will ever be found contagious—as well for good as for evil.

From the American Agriculturist.

MERINO SHEEP.

Having of late taken much interest in the growth of wool, and incidently in the best breed of sheep for that purpose, I have concluded from all that I can learn of the present flock-masters of the country, the prices of wool, and the condition of our American lands for the wool-growing, that the original Spanish sheep, of the importation from 1802 to 1815, are the best for the general farmer, and particularly for my own purposes. Many years since, I was interested in the sheep of some of those importations, and I well recollect their fine, substantial forms; their well-covered bodies; and the beautiful and uniform fleeces which they annually yielded. But, so far as I can understand, those animals have many years ago passed away in the drooping interest that our people have suffered in the production of the valuable wools; and more than that, in the impatient, fidgety, and uneasy propensity of the American character to change and cross everything of the animal kind which they possess, and the proverbial disposition we have of not "letting well enough alone."

The upshot of all this is, that the ancient flocks of our Merinos, (by ancient, I mean from 25 to 40 years ago,) have been Saxonized by the numerous flocks imported in the years 1825, '6, and '7, principally in speculation. Indeed, these animals, vastly inferior, in my estimation, for the interest of the American wool-grower, to the Spanish sheep, were greedily, and without due deliberation, seized upon by the breeders to improve them. The result has been, an absolute deterioration of their flocks, in constitution, size and weight of fleece, and as I too much fear, the *almost* extinction of the true descendants of the old Spanish sheep from our country. At all events, I have examined several flocks the past season, and among them all I seldom recognised anything that came up to the splendid old originals of the early Spanish sheep imported by Livingston and Humphrey in the early days, and afterward in many select flocks, by several other distinguished sheep fanciers and breeders of that day. There was a character of nobility in their look; a cavalier measure in their tread; and the dignity of an old Spanish don in their presence, which outmeasured anything now seen, except occasionally, among the so-styled Merino flocks of the country. This deterioration is admitted by all with whom I conversed, to be caused by the promiscuous breeding in of the Saxons with the Merinos. In corroboration of this sentiment, I have also the opinions of some of the largest wool merchants of the northern and eastern cities, who unequivocally declare, that the qualities of our wool have gradually been changing from the fine, close, yellow fleece of the Spanish Merino, into the texture of the less hardy, yet finer and whiter, Saxon.

I have for some months been much interested in a sort of controversy which has been carried on in your paper regarding the merits of some sheep, described as being bred in Vermont, and

said by their breeders to be pure Paular Merinos. These animals also have much notoriety in the columns of some of our agricultural papers, where they have been figured, not at all to their credit, nor as proof, (if the pictures be correct likeness,) in my opinion, of the purity of their blood; as either Paulars, or as specimens or the Spanish Merino at all. How this may be, however, I will not pretend to say. *Per contra* to this are the caustic, and, as I think, unnecessarily severe strictures of Examiner in the Agriculturalist. So far as the *facts* of the Examiner are concerned, my own evidence of the present condition of fine-woolled sheep in America corroborate them; but his personalities can have little bearing on the *real* argument as to the existence of, or purity of blood of our fine-woolled sheep generally.

In regard to the existence of the *Paular* as a distinctive variety of the Spanish sheep, in the United States, I infer that they are a *fancy* breed now existing only in the imagination of their proprietors; for so far as I have been able to ascertain, but very few of that valuable variety ever were imported into America at all; and the inveterate propensity of the "universal Yankee nation" to intermix everything of the animal kind, could hardly have left these to escape the usual fate of all things else. I also believe this from the statements of very many highly creditable individuals in different parts of the Union, who have much experience in sheep-breeding, and an intimate knowledge of the principal flocks throughout the country.

Mr. Jarvis, of Vermont, who probably imported more Spanish sheep than any other single individual in the United States, declares in his essay last winter, published in the Boston Cultivator, that his own flock, although kept separate in their varieties for a long time, were all mixed some years ago, and since then he has bred them indiscriminately. It is also asserted by those who have abundant opportunity to know from personal observation, and by wool dealers, who have purchased his wool, that the Saxon blood has prevailed to a great extent among his flock of late years. So also of most, indeed, perhaps, every other *large* flock in the United States. Now and then, select small flocks may possibly be found, few and far between, the relics of some well-cared-for, and choice animals which have not been intermixed with Saxon or other blood. Yet it may in truth be said, if we believe the disinterested testimony of the great body of wool growers throughout the United States, no candid mind can rely upon obtaining pure unalloyed Spanish sheep in any considerable numbers. It appears to me, that the persons who have recommended their animals to the public attention through the agricultural press as pure Merinos, and the blood of which has been impeached should, in justice to themselves, substantiate the pedigrees by unimpeachable evidence. In pursuing this course, imposition may be avoided, and the public confidence restored in such individuals as now stand by public accusation in the unenviable position of selling spurious animals under false names; and as both myself and many of my friends require thoroughbred Spanish rams for the restoration of our flocks, it is not to be doubted that such animals, if existing in the United States will meet with ready encouragement from systematic wool-growers.

As to the Rambouillet sheep of Mr. Collins, I have seen only one or two specimens of his flock. The staple of their wool is remarkably nice, and shows all the fine, silky, softness and length of the most approved Merino of "the olden time." Yet as these are so few in number, I understand that no more of his sheep are for sale at present, my own and the applications of others being refused at any price, they do not appear likely to supply the public demand, at all events, for some time to come.

L. F. Allen.

Black Rock, October, 1844.

☞ The navigation of the Hudson was open at Albany on Monday.

FRUIT AT THE SOUTH.

I presume the idea must have originated here, that our country was unsuited to fruits; but that idea does even now exist to a greater or less extent, and consequently those who do attempt it make failure almost sure, and thus prove the hypothesis—at least to their satisfaction. But thanks to the inquiring age, the indomitable energy of some, and the light of agricultural periodicals, this matter is undergoing a vast change; and I hope, ere many years pass, that our whole country will be convinced that we have a fruit country, and that all of my countrymen will avail themselves of this great blessing. I look on fruits as peculiarly suited to our wants, and thinking as I do, I should be forced into the inference that our Creator had fallen short in his perfect work, if our climate was unsuited to the easy production of fruit.

In warm climates, fruit is conducive to health (ripe fruit, of course,) and if we could have it of a good quality, and in abundance. I think the scourge of our land, *fever*, would be more under our control. In the first place, we all know that the bile formed in our system is secreted in greater abundance in summer than winter, and I think if we would use less food that has carbon as its principal constituent, that we should be exempt from at least much of this increased flow of bile. Fruit is an article of this description; and requiring less carbon to keep our system in operation in the summer, with a great desire for this article, fruit, I think that we could with marked benefit use it freely, and to a greater extent than our northern brethren. I do not desire to enter into the subject more fully; it has been trenched on by many, and only add, that it seems to me, the oxygen in the fruit will combine with carbon in the system, and pass off harmless. You will therefore conclude I regard fruit as conducive to health, which I do.

I put it, on another footing, as our pecuniary interest. All manner of stock will feed on fruit, and most of them will improve in condition; besides, it will act on them as on man as to health —prevent disease. What number of hogs an orchard of 20 acres of good peaches and plums would keep in excellent condition from 1st of May to 1st of September or October, I can not form an idea; but I know this much, that hogs in an orchard of the Chickasaw plum (common plum of all this region) will not come to call, and presume that they would readily come for corn if this fruit was not to their taste. I think that acre for acre, the same land will feed as well as it in corn; for if the orchard be cultivated as I deem it should be, plowed once every spring, and left until the fruit ripens, it will produce quite a pasture of crab-grass, which of itself will fatten stock. And yet another advantage, which is now no longer hypothetical; fruit is profitable to ship to New Orleans, and those who live within even 20 to 30 miles of the Mississippi river can make it profitable, though of course not so much so as if living nearer. I do not see any reason why we might not sell in New Orleans alone 200 to 500 barrels per day of choice peaches, beside a large quantity to the planters on the Mississippi, where steepage water prevents their growing peach and standard trees, to say nothing of Upper Mississippi and its tributaries. Understand, we can ship excellent fruit by the middle of June, and some of the early varieties two weeks earlier—this is of peaches; our strawberries can be sent up and down early enough to pay us well, beside which, the travelling custom on the Mississippi river is immense. We have therefore three good reasons, if I am correct in the first; beside which I state the gratification of our own taste and that of our visitors, as well as the moral bearing. Who would think of offering his friend a glass, when he could place before him, from the 15th of May to the 1st of October, the strawberry, melon, and peach, in season, and apples and pears, &c., all winter?

The peaches will grow here to perfection, equal to any point in these United States; who will affirm to the contrary? If any be found so hardy, and will come here, I pledge my head to prove to him he errs, and will go no farther than Hatch's or Lambert's, or my friend Hebron in Warren county. I have bought peaches in the Philadelphia market at 12½ cents each, and excellent they were. I was in that most delightful city for two years, and saw choice fruits of all kinds, and I do aver, I never saw there a finer peach than I can show on this place in August. There has been shipped in one day, at Vicksburg, for New Orleans, on one boat, 200 barrels of peaches; this proves something.

Many persons rely on seedlings, and will not be convinced by the sad experience of some of us. Mr. Hebron has planted out not less than 1,000 seedlings, and I presume in the last twelve years I have done the same. What are they worth, with all our trouble? Both of us have budded to the sprouts, or tender limbs of over 90 per cent. of our seedlings, I guess, intending to cut down the trees of three to five years old; this shows *our* estimate.

Too many plant fruit trees on worthless land, for noting else. This might do if they would remove four to six feet square of the clay, full three feet deep, and fill up the hole with earth from virgin soil or the woodpile, and then run a subsoil plow eighteen inches deep. I have never elsewhere seen nectarines succeed as well as in this country; I think they do equally as well as the peach. The raspberry of several kinds is very excellent. Summer and fall apples and pears do full as well, so far as our limited experience proves anything. The only difficulty is, your winter fruits transplanted here, ripen too soon for us; but I think time and experience will remedy this in our rearing winter fruits to suit our latitude. The quince I never saw finer; several varieties of the plum do well, and do not fail in one year out of fifteen. The fine plums, cherries, and apricots, have not been tested sufficiently to say anything for or against them. Of the latter I know some few gentlemen who say there is no difficulty at all. The grape will unquestionably succeed admirably. Think of sticking a cutting twelve inches long into the ground, and no more preparation; and yet many cut grapes from such culture.—The fig—go south of us for the best, but not north of us for better.

The cultivation of fruits has as yet in reality received no such attention as you northern folks describe. We dig a hole some fifteen or eighteen inches square, about a foot deep, make the roots adapt themselves to this size, plant sometimes deep and sometimes shallow, owing to ease of digging the hole, and let it grow or not! This is truly about the amount of labor in planting our fruit trees. There are exceptions, I know, but this is the plan. We then plant corn, or cotton, or grain, as it happens to suit, and grow our fruits. Is it any wonder that we have not the rich, luscious fruit of the north?

But we had better stop here, for I have said enough at this time, which I trust most earnestly, will induce some reader of yours to try the cultivation of choice fruits in a correct manner, and I do this with the firm belief that he will succeed, and if influenced to do so by this article, that he will feel thankful to the columns of the American Agriculturist for this advice.

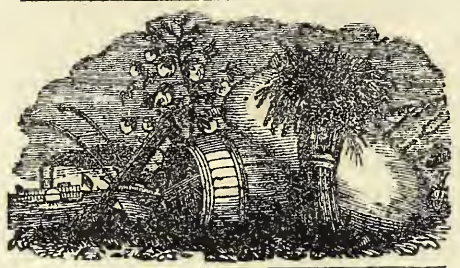
M. W. Philips.

Edwards' Depot, Miss., Oct, 1, 1844.

N. B. We had frost here on the mornings of the 29th and 30th September. I have never known it so early before. Judge Noland, who has been here some thirty years, says it is the first frost in September he ever saw. The frost was plain, when the sun was an hour high.

NIGHT SOIL.

Our farmers might add materially to their supply of manure, by constructing their privies so as to enable them to make use of their contents. A gentleman from Connecticut informs us that he mixed his soil with muck, adding a small quantity of lime and ashes, and made manure enough for five acres, which he planted to corn, and that the crop is equal, if not superior, to any one he has seen.



WEDNESDAY, DECEMBER 25, 1844.

To our Patrons.—The period, the close of a volume, seems to suggest that we should say a few words to those upon whose kind indulgence we have relied, for the many short-comings in the discharge of our duties. Well, what shall we say? We need not apologise now, for the evil would not, cannot be corrected by an apology. We have known and felt that our other duties demanded too much of our time and attention to do justice to the Cultivator; and to make ample reparation for our own remisness, we have yielded the chair Editorial to another and much more gifted occupant—and we hope by his aid to present to the Southern Planters a work that would do honor to any section of the Union. To accomplish, however, a work so desirable in the present state of our husbandry, much depends, for the entire success of the enterprise, upon the planters themselves. They must not only subscribe for and read it themselves, but they must see that their neighbors and friends, in every department of business, are also patrons of the "Southern Cultivator. By this means, it will soon accomplish the greatest possible good of which it is capable—for, not unlike the dews of heaven, it will diffuse its blessings wherever it may fall. The Publishers and Editor will endeavor faithfully to discharge their duties, and while waiting to see how the planters will come up to the rescue, we tender to each the compliments of the season.

☞ Those who intend subscribing for the third volume, should do so immediately—if possible, before the first of January. Hand your DOLLAR to the Post Master, and he will forward free of charge.

Who will get the Premiums?—If we may judge from present appearances, we should guess that our list of premiums will excite quite a rivalry among our friends—for we have already been advised that several gentlemen have entered the list for the most valuable goblet. This is as it should be, and if the prominent planters in the several counties would make an effort to secure a premium, our circulation would be commensurate with the future merits of the work, and its stability placed beyond the reach of contingency. What say you, gentlemen, *who will get the premiums?*

Renew your Subscriptions.—As this is the period when all our subscriptions terminate, we beg leave to remark, to those of our readers who wish to continue the paper, that they must forward the money in advance. The low price at which the work is published, forbids the idea of extending any credit, even if we had any inclination. Our terms are strictly enforced, and no man gets a paper unless he pays in advance. We speak plainly, because everything demands that we should be plain.

Bommer's Patent.—By a letter from Mr. Charles Baer, now in Charleston, we are informed that he will soon visit Augusta, for the purpose of vending his Patent for making Manure. As Mr. Baer, in all cases where it is desired, tests the efficacy of the plan, those who wish his services in instructing and showing them the application of the Patent can obtain them by leaving a notice at this office.

[*From the Boston Evening Transcript.*]

View from the Pyramids of Egypt, Anecdotes, Facts, &c.

The following *recollections* of Mr. Gliddon's 4th lecture, we doubt not, will interest such of our readers as prefer to let the memory dwell upon the single thoughts of a discourse, rather than upon the combined ideas of the *whole*, which is often confused and embarrassed. Indeed, if there be a fault in Mr. G.'s lectures, it is the complexity of his facts and their thick grouping together. They are sufficiently numerous in each lecture to form three of moderate length and *fashionable profundity.*

No description hitherto given by poets, printers, historians or philosophers, comes up to the merits of the view from the Pyramids, nor does any *printing* yet put forth attempt to approach the *fac simile.* Dr. Lepsius has caused a panoramic view to be taken from the summit of the second Pyramid, which, said Mr. Gliddon, will be valued by those who never expect to behold the reality; and the lecturer hoped that besides *the day* view, the Prussians would add their *night* scene of New Year's Eve, 1842, where the blaze of *bonfires* lighted on the top of each three pyramids cast a lurid glare on every side, bringing out the craggy peaks of the long desecrated Mausoleum of Memphite Pharaohs, tinting the dreary wilderness of tombs with a light, emblematical of Lepsius's vindication of their inmates, and leaving the fitful shadows of funeral gloom to symbolise the fifty centuries of historic night now broken by the Hierologists!

"No other scene on earth," said Mr. Gliddon, with a natural enthusiasm excited by the vivid remembrance of the reality which had been seen like a map before him—"no other scene on earth presents at one view and in one series, to the evidence of the senses, such monuments of *Man.* Beginning from an antiquity antecedent to all history, and unfolding their respective ages before the gaze, associated with the sublimest deeds of human greatness, or bedewed with the sad tears shed by unnumbered successions of varied nations, until step by step, generation after generation, century after century, Empire by Empire, his eye follows each monument, down from the mighty *Pyramid* that has survived 5000 suns, to the frail and ephemeral Arab hovel, which, with fresh Nile mud and a few canes, yonder Fallahs are raising for their habitation, and yet from the summit of the Great *Pyramid* you behold the *all!*"

Continuing the lecture, and giving many statistics of admeasurements, chambers, passages, &c., in the Great Pyramid of Cheops, as well as showing that the ancient *Cubit* guided the construction of all its parts, Mr. Gliddon related an anecdote with regard to two small lateral apertures that had been seen in the Pyramid, but the purpose or end of which remained inexplicable to all explorers until 1837, when Col. Vyse discovered that they were the inner mouths of Air Channels, extending on each side to the surface of the Pyramid. Whilst Col. Vyse's men were probing the northern Air Channel, they found it impossible to tell whether it was *open* all the way through, as palm sticks lashed together could not pass; stones, rolled in, stopped; and water, poured in, was absorbed by the masonry. An Arab solved the difficulty in a very simple method. He brought a cat with her young kittens in a sack, and placed the kittens at the bottom of the air hole in the King's Chamber, and shut them in with a stone; then going outside, he placed the cat at the opposite end, and shut her in also with a stone. On going inside again, after an interval, the cat, attracted by the cries of her offspring, being found with her little family at the bottom of the channel, *proved* that the passage was open from top to bottom! This anecdote, as Mr. Gliddon remarked, is not mentioned in Col. Vyse's great work, because they have recorded there, only the *scientific* methods of solving architectural problems!

It seems also that the outer mouth of the southern Air Channel was discovered accidentally by a man whose hat blew off his head whilst standing at the top of the pramid, and who discovered the hole which turned out to be this mouth as he went down the south side persuing his air taken beaver? The lecturer observed that the discovery of these air-holes was a most decided blessing to all explorers and tourists, relieving them essentially from an uncomfortable feeling of suffocation, at times both oppressive and deleterious. Issuing from these hoary places of sepulture, said Mr. G., and coming again to the ligat of day, your are lost in amazement at the *thousands* of tons of *granite*, alone, cut 640 miles off at the quarries of the first cataract, and rafted down the river by the Nile and by Canals to the foot of the Causeways, and thence dragged on sledges up inclined planes, to the Monument wherein they were fitted, after elevation by sheers, derricks, blocks and falls, by the application of Bullock power, and the sinewy arms of thousands upon thousands of aborers.

There was one part of this lecture which was peculiarly beautiful and striking; where, in allusion to the modern discoveries in connection with Egypt, and especially to the fortunate explorations by the Prussian Expedition under Lepsius, Mr. Gliddon, as if with one quick glance at the past, the present, and the future, exclaimed with fervor,

"Dark has been thy night
——Oh Egypt! but the flame
Of new-born science gilds thine ancient name!"

And then quoting with a few slight alterations, the lines by W. O. Bourne, Esq., previously given in this paper, he instantly added, with skilful appropriateness:

"No more thy hieroglyphics shall tongueless be
The empty marvel of a wondering world;
For *Science* hath declared her bright decree,
And from the Tombs of Ages, mystery hurled!
Thy granite shall revive, and speak again,
Through the long lapse of years with freer tongue;
And *we* shall catch its words, nor seek in vain
The occult counsels in thy temples rung;
Champollion gave to mind the master-key;
He read thy records in the sacred sign;
Whilst drinking in at thy fount of Mysterie,
He learned the pategraphic to divine—
And Truth shall henceforth lend her brightening ray,
With *Lepsius'* aid to chase the lingering gloom away!"

The quotation was received with an applause which well indicated that the audience felt the force of his sentiment.

NEW SYSTEM OF MANURING.

A singular idea has just been suggested in Scotland in relation to the nutrition of plants. It may be summed up in a very few words, thus: that a sufficient quantity of the elements of nutrition may be absorbed in the seed of wheat, oats, and barley, &c., to ensure a very large product at harvest, without any other manure. Experiments have been made with complete success, and they have been published by the Agricultural Society of Scotland. Sulphate of Ammonia has been used, and nitrate of soda and potash, and all in combination.—*Albany Cultivator.*

☞ It is stated in the papers that a young wife in Lowell, Mass., has presented her husband with five children in eleven months!—An Editor asks—"Who can beat that?"

The Editor of the *Saturday Courier*, very feelingly answers—"*Who would wish to?*"

ORIGINAL COMMUNICATIONS.

For the Southern Cultivator.

REMARKS OF AN OLD CORRESPONDENT.

Mr. Editor:—I have long thought that it was the duty of each cultivator of the soil, to contribute something to the common stock of agricultural information; and if each member of the agricultural family would only do his part toward spreading useful information on the subject of husbandry, how greatly it would add to the happiness of mankind; for there is not an individual that follows the plow but could throw some light upon the subject of agriculture, were he disposed to do so. The great misfortune is, that nine-tenths of the cultivators of the soil, seem willing to turn over everything in the shape of writing, even on his own honorable business, to some member of the learned professions. Hence it is, that we find it so difficult to persuade the farmers, generally, to join an agricultural society, or to take an agricultural paper. For some years past, I have labored to keep up an agricultural society and to get the farmers to take agricultural papers. It is true, that I did succeed the year now coming to a close, in getting about thirty subscribers, having been myself a subscriber to those valuable works for twenty years, and at this time I take four works on farming, and I find them so profitable to me, that I contemplate continuing all four of them, notwithstanding the low price of cotton. All four only cost me four dollars, and they are, in my opinion, worth to me twenty. I would not be deprived of the pleasure of reading them for fifty dollars, to say nothing of the profit.

I sent you for publication, my plan of preparing my cotton for market; when it is sold, I will give you the price it brings. My fine cotton of last year, sold in December, in Apalachicola, for 10½ cents. It was sold in New York, in June, at 11 cents. Should an opportunity offer, I will send you a sample of my cotton.

I sent you, as you may remember, an analysis of blue marl, which you published some time past. I have hauled up something over a thousand bushels of it, and am preparing it as a compost this year. I first cover the lot where my cattle are penned every night with fine straw; I then spread over a coat of marl. After the cattle have remained on it for some time, I spread a second coat of straw. I have not yet determined whether I will manure my cotton by planting in the check or planting in the drill. I cultivate thin pine land. Should I be spared, I will give you the result of my experiment with the marl.

I was highly pleased to observe in your last number, that Mr. Camak, of Athens, is to be the Editor of the Southern Cultivator for the future. I know of no gentleman in the circle of my acquaintance, that I think so well calculated to take charge of an agricultural work. His mind has, for a number of years past, been turned to the subject of agriculture and horticulture. In addition to his being a fine writer, he is a practical man, and a man of industry and perseverance; and whatever he undertakes, he attends to it as it should be done. Indeed, Mr. Camak, I believe, will do for Southern Agriculture what the lamented Jesse Buel has done for Northern Husbandry, if the farmers will everywhere throughout the country come forward and patronise the Cultivator. And where is the cultivator of the soil, if it is only a garden, that will not give the pitiful sum of one dollar for about two hundred pages of matter, written by practical farmers, that relates to his every-day business, to say nothing of the hundred and one receipts of the most useful kind. When he reads the work, it will be equally valuable to hand down to his children. I will procure you all the subscribers in my power.

Yours, &c.

Eufala, Ala., 6th Dec., 1844.

For the Southern Cultivator.

BERKSHIRE HOGS.

Mr. Editor:—On a recent visit to the White Plains, I learned that Col. Bonner has sent to Alabama some of his most valuable, and finest Berkshire hogs, and in connection with Mr. Crook, of Benton county, will supply the good people of Alabama with the finest pigs of the *pure* Berkshire stock. Among the hogs sent, I notice the justly celebrated premium boar, Rip Van Winkle, well known in this county, and in New York too, for his large size, and fine proportions. Among the sows, were Nonesuch, (a premium sow,) Kitty Clover, Victoria, Adela, Nelly, and others, comprising a list of the choicest Berkshires to be found in the whole country, as they were carefully selected from the best stock, of the best breeders in New York.—But it is useless to particularize. I write this merely to direct the lovers of fine stock, and good pork, to where they may obtain the pure article. Just let them call on Mr. Jas. M. Crook, near Alexandria, Benton county, Ala., and they will find their highest expectations realized in "the stately Berkshires" he can exhibit.

H. C. W.

Woodville, Ga., Dec 4, 1844.

The Smithsonian Bequest.—*Model Farm.*—James Smithson, of London, bequeathed all his property to the United States, to found at Washington, under the name of the Smithsonian Institution, an establishment for the increase and diffusion of knowledge among men. The estate was sold soon after the death of the benevolent Englishman, and yielded the sum of $508,318, which was paid into the Treasury of the United States, December 3d, 1838. On the meeting of Congress next month, the interest due the Smithsonian Bequest by the Treasury of the United States will amount to one hundred and eighty-two thousand dollars. The whole fund will then amount to six hundred and ninety thousand dollars. We have added six per cent interest from the date the fund was paid into the Treasury. Six years have passed away since our agent received this money from the Executors in England, and yet nothing has been done by Congress to carry out the benevolent design of the testator.

At the close of the last session of Congress, Senator Tappan, of Ohio, introduced a bill for the establishment of the Smithsonian Institute, proposing the establishment of a Model Farm upon ten acres of ground in the vicinity of the Capitol, the agricultural and horticultural department to be conducted on the most approved plans, ample provision being made for experiments in farming and husbandry: the whole to be under the care of twelve citizens of ability and experience, appointed by Congress. Among the means of usefulness contemplated in the bill, is the distribution of such fruits, plants, seeds and vegetables, as shall be found useful and adapted to any of our soils and climates, so that the people in every part of the Union may enjoy the benefits and advantages of the experiments made by the institution. All instruction in the institution is to be gratuitous to those students who conform to the rules and regulations. Petitions in aid of this bill are now in circulation in various parts of the Union.—*New Bedford Mercury.*

The idea above suggested for investing a portion of the "Smithsonian fund," is certainly a very excellent one, and we sincerely hope it may, in some shape, be carried out.

But, common sense forbid that *twelve* persons should be appointed to manage a farm of ten acres!—that is, if fat salaries, as undoubtedly would be the case, are to be paid to the managers; and who, in the vicinity of *Washington*, would think of serving in the capacity of an agent of the government without *being well paid?* No, no! the atmosphere of the place smells so strong of "public plunder," that it is almost impossible to resist its influence! If the "Model Farm" is established, therefore, let it be somewhere else than in the District of Columbia; or, if that region is selected, Heaven forbid that a "round dozen" of salaried gentlemen should be called to preside over it!

Growth of American Cotton in India.—In regard to the culture of American cotton in Bengal, it must be admitted, that although the experiments have been numerous, and in some instances on an extended scale, the whole have hitherto been conducted by amateurs, many of whom having satisfied a temporary wish to try the culture, have abandoned it, whether successful or otherwise, so that it is almost impossible to form a decided opinion as to how far the cultivation would answer in a commercial point of view. Of late, however, there appears to be a desire on the part of the Government of Bengal to take up the culture, as evinced in the appointment last year of a gentleman who has had considerable experience in America, for the express purpose of reporting, after a careful investigation, on the capabilities of the soil and climate of Dacca, and the surrounding districts, for the introduction of the foreign staple. We alluded to this circumstance on a former occasion, and we now learn, from the reports which the Deputy-governor has considerately placed at the disposal of the Agricultural Society, and which were submitted at its last meeting, that during the last eight months Mr. Price has been engaged in travelling over various parts of Dacca, Furreedpore, Tippera, and Bulloah, situated on the Dultussary, Conni, Megna, Burrapootra, Luckia, and other rivers in that tract of country, and has seen many spots on which the foreign cotton could be cultivated to advantage, more particularly on the islands situated on the Hottea and Surdeep, as also on other small islands situated on the Hottea river, in consequence of their contiguity to the sea. —Some of his experiments have been successful, while others have failed; but in no instance does he appear to have received fresh seed in time to sow at the proper season; so, on this very essential point, he may be said to have labored under a great disadvantage, besides experiencing other minor difficulties incidental to nearly all first attempts at a new culture. Notwithstanding these natural obstacles, he seems to have seen enough to induce him to hold out sanguine hopes that, if advantage can be taken of the proper season, he will be able to cultivate the plant to advantage in the Dacca district. In consequence of this favorable opinion, we understand that Government have it in contemplation to commence the work in earnest, by the appropriation of such tracts in the district as, from previous examination, may be considered most fitting for the cultivation of American cotton, and to combine therewith a matter of even still greater importance, namely, the increased cultivation and improvement of the indigenous staple.—*Calcutta Star.*

IN FARMING—MANURE IS "THE PRINCIPAL THING."

To the Editor of the Marlboro' Gazette:

There are so many good *hints* in the enclosed extract from the last number of the New England Farmer, and there are so many of my acquaintances who ought to be ready to *take* them, that I cannot forbear asking you to give them a place in the Gazette.

The chief, the grand, I was going to say the sole object, with every farmer, should be the *accumulation of manure*, from one year's end to another, day in and day out, and from every possible resource. Not a single pound of feathers, or of hair—of horn or of hoof—not a single pint of ashes, or of soap suds, or of urine—not a weed, if it were possible to prevent it, should be lost—all—all should be saved and converted *into manure*. Of one thing, every farmer is certain, that *cultivation exhausts his land*—something, of course, must be done to *restore* that of which it is exhausted. How long will a horse work if he gets no feed? How long will the best cow give milk if she gets nothing to eat? Neither can a farm be worked and milked without being *fed*.

Instead of looking only to the stable, or the cow-pen, or barn-yard for manure, and managing them carelessly and unskilfully, the *thinking* farmer will reflect, that there is nothing which will *rot*, but what may be converted into good fattening food for his farm. If a horse dies on the farm, let him be covered with cart loads of earth, and the very gasses that escape in the course of putrefaction, will impregnate and make good manure of the whole mass. Let nothing be lost—not even the offal of poultry or the pigeon house. I. S. S.

"GLEANINGS ON THE FARM.—'*Gather up the fragments, that nothing be lost.*'—The first lesson in true economy is, to take care of small matters. When one has made a fixed principle of action, he will be very sure not to suffer more important matters to be neglected. There are many things scattered over the farm that are worth saving, and may be turned to profitable use, if taken care of *now*, but which will loose their value, if neglected much longer. Of this character, are substances for manure and litter—such as vines, potatoe tops, leaves, bog herbage, &c. The collection of leaves for manure is particularly deserving attention. 'For many years (says one who has practiced this,) I have been in the habit of collecting in the fall, leaves in my wood lot, and to use them as litter for my cattle through the winter. When the floor is cleared in the morning, the leaves and dung are turned over and chopped together, before they are thrown out. This kind of manure for potatoes, I find superior to any other I ever used; it unites the richness of animal matter with the sweetness of a woodland soil; and I feel confident that it not only contributes to the abundance of the crop, but that it ensures a superior quality. From the repeated benefits I have derived from the practice, my estimation of leaves has gradually increased, and they have become such an essential article in the cultivation of my small farm, that I should be now at a loss how to do without them. They pack better if collected when somewhat damp, and when mixed or chopped with the dung, will more readily ferment.'

"Perhaps there is a good deal of small stuff scattered over the farm that will serve for fuel, which may as well as not, and a good deal better, be picked up now, before it is hidden by snow—which latter, though, perhaps, not very soon expected, may come without warning, and when little anticipated. At any rate, it is wisdom to prepare for emergencies.

"Let everything be saved for winter fodder that is eatable by your animals. 'We hear it foretold by our veteran farmers, (says the American Agriculturist,) that the coming winter will be a tolerable severe one. They say they have never seen a season of great abundance, especially in fruit, that was not followed by a hard winter.' Though little faith is to be had in such signs, it is best to prepare for the worst, and save everything to lengthen out your stock of food, that can be saved. Some vegetable substances which cattle will not eat *alone* if they can get more palatable food, they will freely devour in winter, if mixed and chopped with a portion of eatable hay.

"Turnip and cabbage leaves, and corn husks, should all be husbanded for fodder. They are superior as food for cattle, to hay of common quality.

"We have seen pumpkins left in the fields to rot, the farmer having, seemingly, grown more than he knew how to dispose of with profit. At one of the meetings of the New York Farmers' Club last summer, a gentleman presented some sound pumpkins of the growth of the previous year, which had been preserved by placing them in one of his out-buildings on rails laid in courses, so that the pumpkins did not rest on each other. This plan seems worthy of trial: for stock—cows in milk especially—would be much benefitted, by a meal a day of pumpkins, in the last of winter or beginning of spring—more especially if their owners do not provide other *condiments* for them in the shape of carrots, turnips or beets; and it is yet true—'and pity 'tis true'—that many a stock of unfortunate animals have to live through, or rather get through, the winter, without having a taste of a root—kept upon the *low diet* system—the *Graham* system in an aggravated form—that is, a *few* cornstalks, a *very little* good hay, and a *great deal* of—straw. Pity that the poor brutes thus cheated of their dues, had not the faculty to persuade their owners that both self-interest and humanity dictate that they should keep no more stock than they can keep *well*.

"Your sheep will thank you for saving your bean vines for a bite in the winter; and in this connection we introduce the following, thinking it may impart information from which some may profit:

"'*Beans for Sheep.*—If you have any beans on hand which are unfit for culinary purposes, in consequence of being mouldy or rancid, wash them carefully and give them to your sheep. A gill a day will be of more benefit to them than a pint of corn. Beans, for sheep, even in this condition, we consider equal to the best corn in any state.—*Maine Cultivator.*'

"Upon the above, Dr. Lee, of Buffalo, remarks: 'The Cultivator tells but half the story. *Why* is a gill of beans better for sheep than a pint of corn? This is an important problem, and one that not one flockmaster in a thousand can answer. If the object be to form fat sheep, then the remark that beans are worth more than corn, is not true—for corn contains more of the fat-forming elements than beans. But if the object be to form *muscle* and *wool*, then the remark is true. Beans contain more of the element of wool than any other cultivated plant. Hence nature, ever true to herself, has endowed the sheep with a taste for the plant which is denied to the pig.'"

From the American Farmer.

ACCUMULATION OF MANURES.

The following article has many suggestions by which the farmer may profit, and although written for the meridian of Maine, is equally as applicable to any other State in the Union where there are worn out lands. It is unfortunately the case everywhere among farmers in this country, that the procurement of manure is not made a part of their system of husbandry; and that a too-common opinion prevails, that they cannot spare the necessary time and force to gather the materials for making manure. Than this, a more erroneous opinion never entered into the mind of man. We have thought much upon this subject, and had some little experience, and we have no hesitation in declaring, that a man and a team employed the year round in the collection of materials for forming manure heaps, would add fifty per cent to the producing capabilities of any farm—nay, we will go farther and say, that if such materials, when collected, were judiciously composed and preserved, that they would make every cultivatable acre of impoverished land increase its yield a hundred per cent. Where farms may lie upon salt water rivers, with salt marshes attached, the supply of manures are not only inexhaustible, but of the very best character, where the proper pains were taken to procure the *mud* and either compost it, or spread it over the cattle yard, as besides the vast amount of vegetable remains, the saline matters found therein are of the very first importance.

From the Maine Cultivator.

MANURE.

MESSRS. EDITORS:—Very few farmers, comparatively, are to be found who make any efforts at all to increase either the quantity or the quality of their manure. The subject is a very important one, and it is to be hoped that farmers will, ere long, become not only thoroughly convinced of the importance of attending to the manure heap, but that they will do something more than to *talk* of the excellency of manure.

Now it does not require a large capital in order to make an abundance of manure—it requires only a *firm* resolution, a good yoke of oxen, a good cart, a good wheelbarrow, and a good spade. We do not expect to see every farmer in moderate circumstances build a splendid stercorary, but then every farmer may make a compost-yard of his barn-yard and may double or treble the quantity, and also improve the quality of his manure. It would be well if every barn-yard were shaped somewhat like a milk-pan, sloping every way towards the centre; but if a farmer cannot afford the expense of bringing his barn-yard to the right shape, he can, at least, haul a few loads of dirt, and form a dam at the lower part of the yard to prevent the liquid portion of the manure from escaping.

Instead of suffering the liquid part of the manure of the barn-yard to escape, we should move the wheelbarrow, and supply a sufficient quantity of materials to absorb the same.

But who has thought highly enough of our *swamps?* Who can calculate the amount of muck or mud to be found in the State of Maine? If this valuable material can be rightly managed—if our farmers, one and all, will make strong efforts every year to procure this material from swamps, pond holes, from the brooks and other places, what a change may be wrought in our agriculture!

Suppose that a farmer by driving forward his business and making a proper improvement of time can be able to spare three weeks in the course of each year, in collecting materials for manure—what effects will this have upon his prosperity? How much manure will a farmer who like Farmer Thrifty is a man of energy collect in eighteen days—at only six loads per day it will give one hundred and eight loads—let this be thoroughly mixed with the manure of the barn yard, the stable, the sheep-pen, and the hog-yard. When clearing out the manure of a barn-yard let a quantity of mud, &c., be placed upon the bottom Let us also cover over the animal manure with loam, turf, mud, &c. so that it may not escape. When digging over manure let us not forget to cover the same with some material calculated to prevent the precious matter from escaping into the atmosphere.

It has been often asserted that one load of animal manure will ferment three loads of peat—this is a substance which is to be found in swamps, and differs from mud or muck. It must be more of a task to bring peat into the right condition to operate well as manure than mud or muck.

It is easy enough to see that every farmer who can find mud or muck, &c., may double or treble the quantity of his manure at a very trifling expense. Those who may not happen to reside near some swamp may certainly procure at least a considerable quantity of rich matter in waste places by turfing the highway, &c. But suppose that a farmer cannot get materials enough to satisfy his ambition, he can add to his manure by plowing in green crops. Various modes of plowing in crops for

manure have been recommended. Plowing in grass stuble immediately after haying, and sowing in fresh grass seed, is one excellent method of improving the soil. If grazing lands that are cleared of obstructions to the plow were managed in the same way the farmer will find his labor to be well applied. Plowing in crops of clover at full length, and the using of Plaster of Paris to aid the growth of the clover should in some cases be practiced. Every farmer should take an agricultural paper, and these should give out to the people in plain, unvarnished language the necessary knowledge. If young lawyers multiply upon us and contrive by vile intrigues to sit in high places and hold agricultural skill and industry in the most sovereign contempt, there will yet be found a "redeeming spirit in the people." J. E. R.

Rumford, September, 1844.

CARRIED AWAY BY INTENSE FEELING.—An anecdote of the Attorney General of Massachusetts is told in a late Boston paper. The worthy old gentleman must have been completely carried away by his feelings, yet who can blame him? Read the story:

The Attorney General, now eighty years of age, and said to be more competent to the discharge of the ardous duties of his honorable station than almost any practitioner, by experience, as well as a remarkable retention of mental power, was managing a case in behalf of the commonwealth in Middlesex county, where a man was indicted for gouging out the eyes of a girl, because she made oath that he was the father of her illegitimate child.

Her brother, an intelligent lad of nine years of age, was on the stand, as a government witness, and his relation of the fact which he saw produced an electrical effect on the whole audience. The girl was also present, in total blindness, and every circumstance attending the investigation of the horrible barbarity, was highly exciting. The boy stated the preliminary circumstance, and then said:

"I was cutting bean poles behind the barn, and my sister was milking. I heard her scream, and then I ran with a pole in my hand. As I came up I saw that he had pulled her over; then he looked over his shoulder, to see who was coming, and I struck him with the pole and broke his jaw."

"Why did you not repeat the blow?" exclaimed the Atterney General, carried away by the remendous interest—why did you not repeat the blow, and knock his d—d brains out?"

"Mr. Attorney," said the Judge, "you well know that profanity in court is a high offence, punishable with imprisonment: but in consequence of the unusual excitement of the case, it will in this instance be overlooked."

Mile.—There is a great difference in the number of yards contained in a mile in different countries. The following table, showing the difference will be very useful to many persons as a reference:

Mile in England or America	1760	yds.
" Russia	1100	"
" Italy	1476	"
" Scotland and Ireland	2200	"
" Poland	4400	"
" Spain	5028	"
" Germany	5866	"
" Sweden and Denmark	7223	"
" Hungary	8800	"

CUT AND COME AGAIN.—A lady passing through Chartres-street yesterday, whose dress, in diversity of hue and richness of coloring, resembled a peripatetic flower-pot, dropped, unknown to herself, from her bonnet a snow-white plume. A gallant—with a turf of hair on his chin as large as that on the scalp of a Crow Indian—who saw it fall, hastened to pick it up. Presenting it to her, he said—

"Madam, you have lost your wit; permit me to restore it to you—I say your wit, madam, because, you know, Pope says—

'A wit's a feather—'

Ha! ha! ha!" and he laughed at what he assumed to be his own smartness.

"Yes, sir," said the lady, taking her plume from him, "and the same author remarks, in connection with your quotation that—

'A fool's a rod—'

Now, excuse me, sir, if, while thanking you for my plume, candor compels me to say that I look upon you as the *greatest kind of a sapling.*' *Picayune.*

A SWINISH MULTITUDE.—The Cincinnati Chronicle says that at least 50,000 Hogs will reach that city this season from Kentucky alone. The larger portion of them have already arrived there.

One house in Cincinnati cut up two thousand Hogs one day last week.

TENDER MERCY.—The N. Y. Evening Mirror states that a gentleman of that city bought a piece of property some years ago, for $20,000. He paid $10,000 "down," and for several years the interest on the balance. The mortgage he had gave was foreclosed, the property was bought for a small sum and a decree entered for the balance, which was about $10,000. The mortgagee, not content with having his land back again and the $10,000, has filed what is called a creditor's bill, to see if he cannot find something more on which to lay his hands! This is the mercy which some creditors exhibit.

Successful Railroad Managemont.—The Philadelphia U. S. Gazette says that the business of the Western Railway, between Boston and Albany, will astonish many this season. The total revenue for 1842 was $522,688, last year $573,882, and this season it bids fair to reach one million dollars, being already $272,828 ahead of the amount received to a correspond ing period of 1843.

CONTENTS OF THIS NUMBER.

Communications.

Remarks of an Old Correspondent, ... 206
Berkshire Hogs, ... 206
Oration, delivered before the Alumni Society of Franklin College, by the Rev. Geo. F. Pierce, ... 201—202

Selections, Extracts, &c

Botany, ... 202—203
Merino Sheep, ... 203—204
Fruit at the South, ... 204
Night-Soil, ... 204
To our Patrons, ... 205
Who will get the Premiums, ... 205
Views from the Pyramids of Egypt, Anecdotes, Facts, &c., ... 205
New System of Manuring, ... 205
The Smithsonian Bequest—Model Farm, ... 206
Growth of Cotton in India, ... 206
In Farming—Manuring is the principal thing, ... 207
Accumulation of Manures, ... 207
Manure, ... 207—208

BACON'S LARD LAMPS.—A new article, superior to all others for this purpose, emitting a good clear light without smell or smoke, and at an expense, counting Lard at 8 cents a pound, of about a quarter of a cent an hour.

These Lamps have been satisfactorily tested, and are recommended as "just the thing" for the use of planters, and all others who study utility, neatness and economy.

A supply of the above Lamps, with Fillers and Wicks for them. For sale by

HAVILAND, RISLEY & CO.

jy 24-d,c&Cultf

TEXAS COTTON SEED.

THE subscriber offers for sale, Cotton Seed of very superior quality. The original stock was procured in Texas, and cultivated on his plantation in Newton county, for the last three years, with extraordinary success. The yield is much larger, and the quality superior to the Petit Gulph or other kinds of Cotton usually grown in this section of country.

Planters who purchase a supply of the seed may rely upon sufficient increase in product of the first crop to refund the outlay for seed.

Planters who take an interest in improvements of this sort, are referred to the annexed certificates, and the Cotton raised from the seed may be seen at the warehouses of Adams & Hopkins and Clark & Roberts.

JOHN W. GRAVES.

A supply of the above described Cotton Seed is offered for sale at the following places, at five dollars per bushel:

ADAMS & HOPKINS's Warehouse, CLARK & ROBERTS's do., D'ANTIGNAC & EVANS's do., HAND & WILLIAMS's Store, } Augusta.
McKINLEY & MARTIN's Store, Madison.
HILL, MORROW & HILL's Store, D. DICKSON & Co.'s Store, } Social Circle

Georgia, Newton County:

I hereby certify that I obtained from John W. Graves, of this county, a sack of Cotton Seed, (which he represented of superior quality introduced from Texas,) which I planted last spring, and find to exceed my most sanguine expectation. I planted it two or three weeks after my other cotton, (which is the Petit Gulph,) and notwithstanding the season was dry and unfavorable throughout the year (the growing season) yet it is by far the best cotton I ever made. I think by the time it is all gathered, the best part will yield 2000 to 2500 pounds per acre. My neighbors who have seen it are of the same opinion. From the trial I have made, I believe it will yield double as much as my other cotton on land of the same fertility [Signed] JACKSON HARWELL.

24th October, 1844.

Georgia, Morgan County:

This is to certify that I am neighbor to John T McNeil, Esq., and that he last spring got a load of Texas Cotton Seed from John W. Graves, Esq., of Newton county, and planted them on what I consider average land of his farm; and from frequent observation of the crop, with his other cotton, (which is the Petit Gulph,) I do believe it will far excel any other cotton I have ever seen raised in this section of country. And I also believe that the staple excels any other I have ever examined, as to fineness and color.

[Signed] JOHN P. EVANS.

This will certify that I acted as overseer for Mr. John T. McNeil for the year 1844. My knowledge of farming induces me to believe that the Texas Cotton, raised by Mr. McNeil this year, is a very superior article, and with me preferable to any other cotton I have ever raised. It is of long and fine staple, and well bolled, and easily picked out, and has withstood a drought this year better than the Petit Gulph Cotton. It is, in a word, a valuable cotton. I have ginned eight bales of the Texas Cotton on Mr. McNeil's *Carver Gin*, and find that it yields one pound of clear cotton from three of seed cotton; and from my experience of thirty years in cotton growing, I have never raised any I think equal to the Texas Cotton.

[Signed] ALLISON KENT.

AUGUSTA, October 30, 1844.

John W. Graves, Esq.:

Dear Sir—Having been called on by you to make a statement in relation to your Texas Cotton, we take pleasure in saying, that for the last two or three years we have received at our warehouse your cotton crops. The quality has invariably proved very superior, both as to color and length of staple. On sale, it has always brought the highest market price. We consider it a very superior article in the cotton line.

Your obedient servants,

ADAMS & HOPKINS.

Mr. John T. McNeil:

Dear Sir—We have received the two bales of Texas Cotton sent by you to us, and take pleasure in saying that in color and length of staple it is superior to anything we have seen; and cheerfully recommend it as such as will always bring the highest market price.

Your obedient servants,

n5-wp&Ctf CLARK & ROBERTS.

PRINCE'S

Linnæan Botanic Garden and Nurseries,

FLUSHING, L. I., NEAR NEW YORK.

THE New Descriptive Catalogues (which have *cost* over $700) of the TREES, PLANTS, and SEEDS at this Establishment, will be sent gratis to every *post paid* applicant by addressing

WILLIAM R. PRINCE & CO.

Flushing, Dec. 4, 1844.